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ABSTRACT

In a March 1980 Systems and Procedures Exchange Center (SPEC) survey on preservation activities in Association of Research Libraries (ARL) member institutions, 40 libraries reported having conducted a formal preservation study or needs assessment, 28 had adopted planning or policy documents, and 58 reported operating an active preservation program with an average of three staff members assigned full or part-time to preservation/conservation functions. Another 19 members intended to implement such a program within 5 years. This kit on planning for preservation of library materials contains 17 documents: (1) initial planning reports and recommendations from University of Notre Dame, University of Virginia, University of Wisconsin-Madison, University of Kansas, Arizona State University, Duke University, University of Utah, and Western Council of State Libraries; (2) program and policy statements from University of Connecticut, Boston University, Brown University, Stanford University, and Southern Illinois University; and (3) historical perspectives from the National Library of Canada, the Library of Congress, Yale University Library, and Columbia University. The concise summary that introduces the collection briefly discusses current concerns and planning efforts, and tools and trends for the future. (THC)

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Planning for Preservation

Kit 66

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PLANNING FOR THE PRESERVATION OF LIBRARY MATERIALS

During the last decade, libraries have increasingly recognized that their collections are seriously endangered by a combination of damaging environmental conditions, improper handling, and the declining quality of the materials themselves. It has been estimated that a third of the materials in research library collections have reached a state of deterioration that makes further use almost impossible, and as many as half may be unusable by the end of this century. Although major libraries have begun to look seriously at preservation problems, and some have moved toward establishing broad programs to control and correct them, such efforts have been slowed by a lack of trained preservation specialists. In addition, unlike other areas of librarianship such as acquisitions, cataloging or reference work, preservation has as yet no common standards or traditions of practice.

CURRENT CONCERNS AND PLANNING EFFORTS. In April 1977, ARL members responded to the first SPEC survey on preservation. At that time, very few had codified preservation programs, and although planning had begun in several more, it was often focused on the binding component (Kit 35). In a March 1980 SPEC survey, 40 libraries report having conducted a formal preservation study or needs assessment, 28 have adopted planning or policy documents, and 58 report operating an active preservation program with an average of three staff members assigned full or part-time to preservation/conservation functions. Another 19 intend to implement such a program within five years.

In many instances, the impetus for preservation programs has come from individuals responsible for rare book, manuscript or archives collections. However, staff who handle general materials in the binding, circulation, preparation or processing units are playing an increasing role in stimulating institutional attention to preservation as it affects all materials. Memoranda and reports describing needs and potential responses have proven useful starting points, some prepared by individuals and others by specially-charged committees or task forces, with the latter involving staff from several units who can bring broad experience to the process and take back to their own areas a deepened understanding of the issues. A number of libraries have expanded the scope of their binding or mending units, sometimes adding professional staff, to reflect the growing recognition of their importance. Procedures are being re-examined to insure that materials and techniques are consistent with recent technical advancements, and staff are taking advantage of workshops and technical publications to upgrade skills.

In other cases, catalysts from outside the library institution have expedited the development or expansion of activities. Outside forces have included management studies, both of a general nature and in several instances the OMS Collection Analysis Project with its preservation self-study module; surveys by outside consultants; and grant-supported projects enabling institutions to dedicate staff to specific preservation activities.

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SPEC survey responses carry a dominant theme that the scope of preservation issues vastly exceeds the resources currently available. Cost implications have discouraged and frustrated many efforts, and action frequently has been postponed in hopes that future technical developments might substantially reduce costs, and that cooperative approaches or a national program might reduce local responsibility. Some formal and informal cooperative efforts, including the New England Document Conservation Center and the Western States Materials Conservation Project, are beginning to have an impact, encouraging the sharing of experience and expertise among libraries and generating limited but important joint programs for preservation microfilming, staff training, and pooled treatment facilities. A "national program" has yet to emerge, chiefly because the institutions best suited to directing one must still devote most of their efforts to internal preservation priorities. Recognizing this, individual libraries are accepting the local challenge, and are able to benefit from the experience of pioneer programs - notably those of the Library of Congress, the Newberry Library, the New York Public Library, and the university libraries of Columbia and Yale.

TOOLS AND TRENDS FOR THE FUTURE Three ingredients appear critical to preservation planning: 1) the broad dissemination of reliable technical information and procedural models; 2) a substantial increase in the number of specialists to direct local programs; and 3) the creation, on the local level, of an organizational capability to develop preservation programs and incorporate them into the operational structure of the library. This kit is one response to the information needs, which are also being addressed by a growing number of articles, pamphlets and books, and by materials produced through programs such as Yale's NEH-funded preservation project. Qualified specialists will come more slowly, but educational opportunities are steadily increasing. Workshops and introductory courses are widely available: apprenticeships and internships are being offered at the Library of Congress, Johns Hopkins and, during its NEH project, at Yale; final preparations are underway at Columbia's School of Library Service to launch graduate degree programs for library conservators and preservation administrators.

Organizational and informational needs are being addressed by the OMS Preservation Project, begun in early 1980, to produce planning tools and procedural/technical manuals for libraries seeking to expand and improve preservation efforts. This NEH-supported project, to be completed by December 1981, has three phases. The first, which includes the SPEC survey, involves assembling existing materials to prepare a practical manual, or set of manuals, for activities which comprise a broad preservation program, including environmental control, shelving and handling, binding, mending and repair, restoration, replacement and reproduction. To facilitate use of these manuals, a planning procedure will be developed drawing on the experience of the OMS with programs such as the Collection Analysis Project and the Management Review and Analysis Program. This procedure will provide a structured approach to the numerous administrative and organizational decisions which must be made, and will enable a library to review the extent of deterioration in its collections, assess the scope and effectiveness of its current activities bearing on the physical condition of materials, and develop a phased approach to improving and expanding those activities consistent with the library's service goals and present and potential resources.

The kit on Planning for Preservation of Library Materials (#66, July-Aug. 1980) contains 17 documents (99 pages), including initial planning reports and recommendations, program and policy statements, and historical perspectives on preservation development. The kit is available for $7.50 to ARL members and SPEC subscribers and for $15.00 to all others (plus $2 handling fee), from SPEC, ARL/OMS, 1527 New Hampshire Ave., N.W., Washington, D.C., 20036.

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INITIAL PLANNING

University of Notre Dame Libraries
Five Year Development Program 1980-1984

January 1980

SUMMARY

External evaluations, relative rankings in the Association of Research Libraries, and campus consensus point to serious deficiencies in the ability of the University Libraries to adequately support the teaching and research activities of the faculty and students. Despite a number of significant bulk purchases and the establishment of a $10 million goal for library endowment, there are significant problems remaining. Accordingly a five year development program is proposed to upgrade and expand the collections and services of the University Libraries. The program calls for two sets of goals for the period. The first involves improvements that should be largely attainable with existing resources:

1. On-going improvement of efficiency of operations.
2. Implementation of staff development programs for library faculty and staff.
3. Upgrading of staff salaries.
4. Elimination of processing backlogs.
5. Regular shelf reading.
6. Resolution of the future of the College Library.
7. Definition of mission of specialized library units and their collections.
8. Development of a comprehensive acquisitions policy statement.
9. Improvement of communication with users, faculty and students.

The second set of eight improvement goals will require additional one-time capital and/or operating funds:

1. Development of a machine readable data base of local holdings and appropriate access mechanisms.
2. Implementation of a systematic collection review and preservation program.
3. Replacement and/or upgrading of microtext and audio facilities.
4. Extension of Checkpoint security system to the science and engineering libraries.
5. Obtain and outfit remainder of tower stack space in Memorial Library.
6. Increase in annual collection growth rate to 5%.
7. Expansion and improvement of staffing to provide general and specialized assistance to users.
8. Automation of circulation system.

The total cost for these at the end of five years is $580,000 in capital expenditures and $1,336,200 in regular operating budget, stated in 1979 dollars. The implementation and funding for this program will raise the Libraries' ranking in the Association of Research Libraries and, more importantly, provide to a reasonable degree the kind of library collections and services needed by the faculty and students in a university striving for academic excellence of national significance.

CC1

will not be starting from scratch, it will still be necessary to acquire some in-house systems/programming expertise for planning and local applications, along with appropriate hardware and software. Initial planning along these general lines is proceeding, but cost estimates can at this point be only tentative in detail. Overall, it is anticipated that $100,000 in one-time costs will be involved, together with some $70,000 increase in annual operating costs, after allowances for any staff savings resulting from the application of new technology.

2. We must phase in a systematic collection review and preservation program. For many years, if not throughout their history, the University Libraries have done minimal work on the physical condition of the collections. Unbound materials have regularly been sent to the shelves and only seriously damaged materials have been repaired or rebound, and then frequently in a very amateurish and inadequate fashion. Even apart from local neglect, paper is subject to deterioration over time--a condition that has effected holdings of materials published in the second half of the 19th century and the first half of the 20th century. This deterioration can be significantly retarded with proper binding and care. Within the Memorial Library tower alone most of the more than 40,000 shelves contain one and usually more unbound items and there are numerous serials where no binding has been done for a number of years. There is also a large volume of material, estimated well in excess of 50,000 pieces, that cannot be readily and economically restored. A small amount of this can be reasonably withdrawn from the collections, but most must be replaced or microfilmed when that is not feasible. In addition, incomplete serials and sets should be screened to insure that their condition is appropriate for shelving as received and, where it is not, appropriate action should be taken.

Within their very limited resources, the Libraries have begun to address these problems. However, Notre Dame spends less on binding than any other university ARL library, and only about one-third of the median for other libraries. The current allocation is not sufficient to bind all our current serials received, much less unbound monographs received, or retrospective material. Typically binding budgets in academic libraries approximate 10% of the materials budget. In recent years at Notre Dame, it has been 4.5%. Moreover, the situation is compounded by the large volume of material acquired outside the acquisitions budget. It is thus clear that without additional staffing, and binding funds for this work, and an administrative setting that can provide on-going impetus, we will not be able to deal with even the most serious aspects of the problem. For this reason we are proposing a concerted and on-going conservation project, at an annual cost of $88,200.

3. We must embark on a major program to replace and/or upgrade our audio and microtext equipment. This is essential if we are to prevent the total collapse of current operations in the Audio Learning Center and to provide reasonable user access to our growing microtext collections. The audio equipment currently in use represents hot tube technology and dates from the opening of the building in 1963. Moreover, the wiring for this equipment has suffered the ravages of time with resulting serious bleeding between the channels, at times making reasonable listening by users next to impossible. All of this equipment must be replaced with solid state hardware and the entire installation rewired. Similarly, much of the microtext reading equipment has become outdated and no longer reparable. Moreover, it is important that we have reasonable hard copy production capabilities, which

University of Virginia

February 25, 1980

CHARGE TO UNIVERSITY LIBRARY COMMITTEE FOR PRESERVATION

Traditionally it has been the function of the Library to acquire, house, and provide access to materials in an effort to fill the informational needs of its community. It is urgent that we recognize the preservation of library materials as another of those functions.

Informed, well-reasoned, long-term strategies must be developed in order to insure the continued existence and usefulness of our collections. To achieve this end, a standing Committee for Preservation has been established. The initial task of the Committee will be to investigate the scope of the problem of deteriorating materials within the University Library and to educate itself with respect to the variety of available solutions. In addition, the Committee will investigate and make recommendations to the Directors' Council concerning the following topics which demand immediate attention:

1. Emergency procedures; the development of a plan for the evacuation and care of library materials in case of fire or flood.

2. In-house mending procedures; a review of methods and materials.

3. Commercial binding; an appraisal of the current binding practices and recommendations concerning both choice of binder and binding specifications.

As well as addressing these short-range issues, the Committee will be charged with the following tasks:

1. The development of staff and user awareness programs in the care and handling of library materials.

2. The development of routines for identifying preservation problems and guidelines for decision making with respect to the solution of those problems; e.g., filming, withdrawal, replacement with reprints, restoration.

3. The submission of a thoroughly documented position paper on standards for atmospheric and temperature control in all libraries.

4. The making of recommendations concerning future preservation activities, including participation in state and national programs, establishment of a restoration laboratory, creation of a permanent preservation office, and the like.

University of Wisconsin, Madison

PRESERVATION OF LIBRARY MATERIALS COMMITTEE

ORGANIZATION

As a standing, active committee within the University of Wisconsin - Madison Library System, the Preservation of Library Materials Committee has developed three major goals to guide its deliberations and activities. The committee shall develope its resources in the field of preservation in such a way as to be able to dispense information concerning the preservation of library materials to libraries, agencies and persons requesting information, but with particular emphasis on the needs of the libraries of the University of Wisconsin System. The committee shall direct its energies to the study of areas where preservation procedures could be applied within Memorial Library and the Branch Libraries within the University of Wisconsin Library System. The committee, as a result of its findings shall recommend changes and improvements in those areas where it can be demonstrated that existing policies and practices are not in harmony with sound preservation measures. In order to ensure the broadest base of resource and expertise, the committee will have members from different departments and branches, including both technical and professional staff.

Since the task of preservation has become rather complex, the Preservation of Library Materials Committee will organize itself into subcommittees to carry out the appropriate functions and tasks of the Committee. Each subcommittee will interact on a continuous informal basis with other subcommittees and also on a regular formal basis (scheduled meetings of the whole). When pertinent, the Committee chairperson may request a written report from the subcommittees. Each subcommittee will continuously apprise the Committee Chairperson of its progress. All activities affecting Committee policy or Library policy must be approved by the Committee as a whole.

Editorial Subcommittee

The primary task of this subcommittee is to edit all official Preservation Committee written documents, and when the document is to be published, to take the responsibility for getting it to the Publications Committee of the Library, obtaining copyright, printing details, etc.

Bibliography-Reference Subcommittee

This subcommittee shall actively collect materials for the Preservation Committee's information file and maintain a bibliography in the area of preservation. It shall serve as a reference source for questions of preservation coming from both within and without the library. It should encourage input from the Committee and shall route materials of interest to the Committee.

Communication Subcommittee

This subcommittee shall act as the formal point of contact between the Committee and all other libraries, agencies, persons, etc. It shall screen all incoming communications and make sure that a reply is made. A file of all correspondence shall be kept. The functions of this subcommittee will also include the care and availability of all tangible materials produced by the Committee, exclusive of the information file. The co-chairperson of the Committee shall serve as the head of the communication subcommittee.

Education Subcommittee

This subcommittee will provide instructional materials and activities primarily for library staff (students included) on a regular, ongoing basis. When possible, it will also focus on groups within the academic community such as the Library School faculty, non-University groups (e.g. Madison Area Library Council) and patrons. Examples of activities are: exhibits, poster campaigns, talks, library orientation programs, and leaflets. This subcommittee might also want to recommend other educational activities or materials, upon request, to the Publications and Communications Subcommittees.

Publicity Subcommittee

The task of this subcommittee shall be to prepare formal announcements of Committee activities and products, send announcements to appropriate sources and send copies of the announcements (with notation of source) to the Communications Subcommittee. (Announcements should be sent to Added Entries, MALC Informer, formal journals, etc.) The chairperson of the Preservation Committee shall direct areas of publicity and be kept informed of all publicity announcements.

Conservation of books (Appendix 1a) is a universal problem among libraries of record. That the problem at KU is serious and in urgent need of solution was one of the early conclusions of this committee (Appendix 1); we then applied ourselves to identifying the various causes and manifestations of the problem, with an eye toward recommending reasonable solutions.

Basic to the conservation problem is an identity crisis within the library system, a confusion of mission: on the one hand ours is taken to be a research library with an obligation (local, state and national) not only to make its materials available for present use but also to preserve them indefinitely for the use of scholars centuries hence; on the other hand an emphasis on present use to the exclusion of future use--an attitude better suited to a public or undergraduate library than to a research library--has nearly overpowered our custodial instincts. The first step the library must take is to reaffirm its status as a research library and to recommit itself to the goal of preserving its books for future use; the staff must be informed of this commitment and library policy must be formulated with this commitment in mind.

The existence of the Kenneth Spencer Research Library, while being a life-saver for part of the system's bookstock, has led in many minds to the relaxed assurance that everything worthy of preservation is in KSRL. The Spencer Library does not fulfill the entire research library function of the system; there will always be books worthy of preservation in other parts of the library; the problem of deteriorating books is system-wide and a system-wide conservation program must be developed to deal with the problem.

There already being a certain conservation-consciousness among the KSRL staff and an awareness of the extent of the preservation problems in the Spencer collections (for example, it is conservatively reckoned that at least 50 percent of the over 150,000 volumes in the collections needs some kind of conservation treatment, some simple, some complex) the committee decided to examine the problem in Watson and the branches in an attempt to quantify it. The disheartening results of a stack survey are in Appendix 2. Although not all areas of the library were sampled, we believe that the profile of the age and condition of the collection is fairly accurate. It is on the basis of this survey together with what is known about the deterioration of paper and the condition of library books in general (see Appendix 3, 9) that the committee feels justified in calling the problem severe. There is an unmistakable correlation between the age of the books in the system and the condition of the paper in them. (Fig. 1)

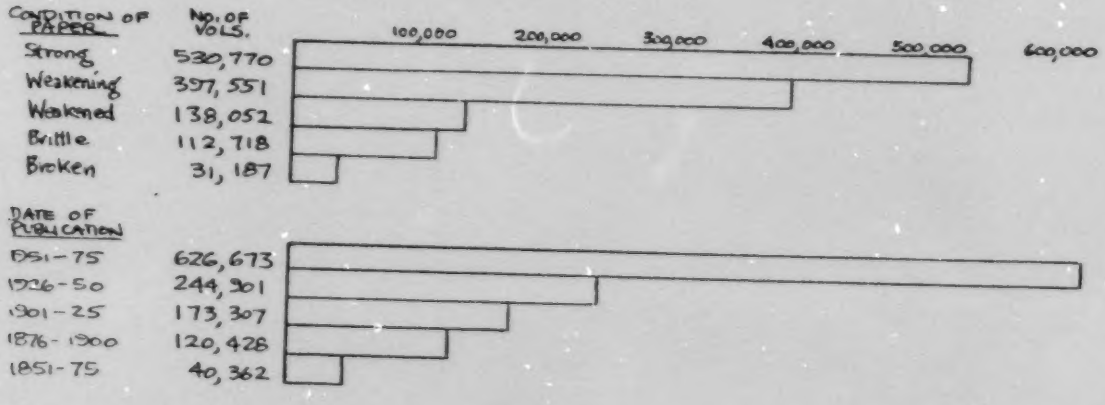


FIGURE 1

BEST COPY AVAILABLE

It is absolutely predictable that as our books turn 75 years old their paper will have become so embrittled that they will be unusable. Figures 2a and 2b show a projection of the condition of the libraries' holdings over the next 75 years; the growth of the number of brittle books (160,000 in 1975, 1.7 million in 2050) is startling but the percentage of the total collection that is brittle is even more so: 13 percent today, 30 percent in 75 years.

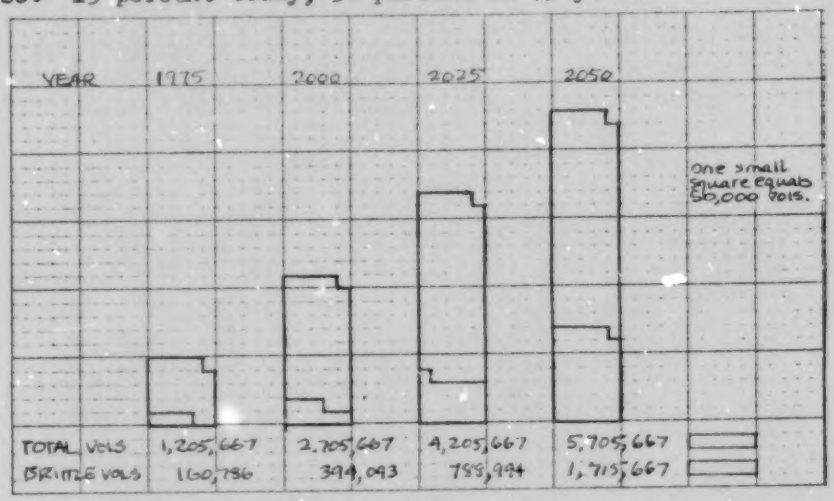


FIGURE 2a

(The projection of future growth is based on a continuation of our current rate of growth of 60,000 vols. per year, of which at the time of acquisition 80 percent is new, 10 percent, 25 years old, 6 percent, 50 years old and 4 percent 75 years old or older.)

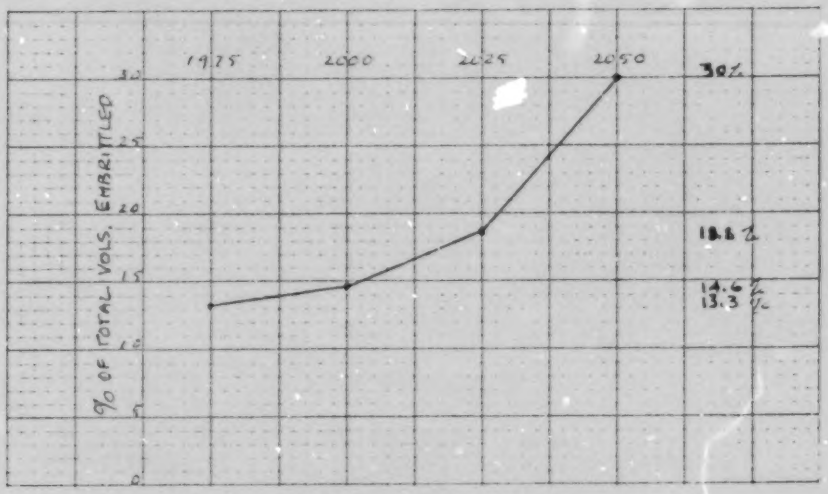


FIGURE 2b

It is tempting--but unwise--to believe that today's paper is somehow different--after all, it looks so white and strong and surely it will stay that way. No, it will not; the brown and brittle paper we have in our collection was itself once white and strong.

The causes of this embrittlement are many but the primary cause is simply a fault inherent in the paper from the time of manufacture: acidity. It is an accepted fact that paper manufactured since 1850 is far worse than paper made earlier and has an expected life-span of less than 100 years--and all but 2 percent of the Watson bookstock dates from 1850 and later.

In addition to the "hereditary" factors over which we have little control, the committee has observed many environmental factors contributing significantly to the premature destruction of our books; these factors can be controlled with a well-designed conservation program. For a sound and detailed account of the effects on books of the customary "environmental factors" (light, humidity, temperature, air pollution) see Appendix 4; it is fundamental that mechanical systems to control these factors must be made a part of any new building or remodelling plans, the sooner the better. Several other environmental factors are having a deleterious effect on the system's books: rough handling and careless treatment by library staff at virtually every point in the system is a major cause of early deterioration; staff disrespect has the further effect of engendering disrespect for the books in the users who then surpass our rough handling. Books in messy heaps, carelessly stamped, tossed in crates for delivery, dropped off book trucks--these things are indicative of a sense of the books' expendability. Grimy, dusty stacks with books on fore-edges, crammed into shelves, leaning, falling on the floor--in short, bad housekeeping and stack maintenance--not only shorten the books' lives but contribute to a careless attitude by staff and users. Copying facilities where any violation of the book is encouraged in order to provide a clear copy, while being a source of instant convenience, have done irreparable damage to our materials. The conservation program must include provision for collection maintenance, pest control, regulated copying and proper shelving practices and facilities (oversize and flat shelving as needed); it must also get to the heart of the problem by modifying staff attitudes. We believe that staff and user unawareness of sound conservation practices (rather than maliciousness) is a sizeable part of the problem. Some harmful practices can be stopped by appealing to the users' good will, some by setting a good example and some (as in the case of the incredibly destructive book drops) by removing the source; others may require application of some deterrent, e.g., charging for the full cost of repairs and losses plus a fine and prosecuting instances of theft in criminal court. The existing exit control system must be improved, possibly by installation of some form of electronic theft detection. (Appendix 5).

The conservation program must also include overseeing those things we do to protect, preserve and restore our books: the incipient restoration shop in KSRL should be staffed and equipped (Appendix 6) and funds restored for out-of-house restoration work; the practices of the Watson Bindery and Bindery Preparations must be examined and, where found deficient, more enlightened practices substituted. (Appendix 7, 7a, 7b).

In the gloom that pervades contemplation of our books' future there are two bright spots: 1) book paper with a 300-500 year life expectancy is now available (it only waits for libraries--which comprise 45 percent of the trade book market--to pressure publishers into using it in their books) and 2) methods of arresting acid-degradation of paper are in the final stages of development and should be economically feasible within the next ten years. (Appendix 9). This library must make a commitment to deacidification of the collections at the earliest possible moment. Another (perhaps deceptively) bright spot for

information preservation is microfilming. Our conservation program should include this technique for preserving texts without saving the actual book but we must beware of regarding microfilming as a panacea: it is expensive, difficult to retrieve and use and it presents its own serious preservation problems.

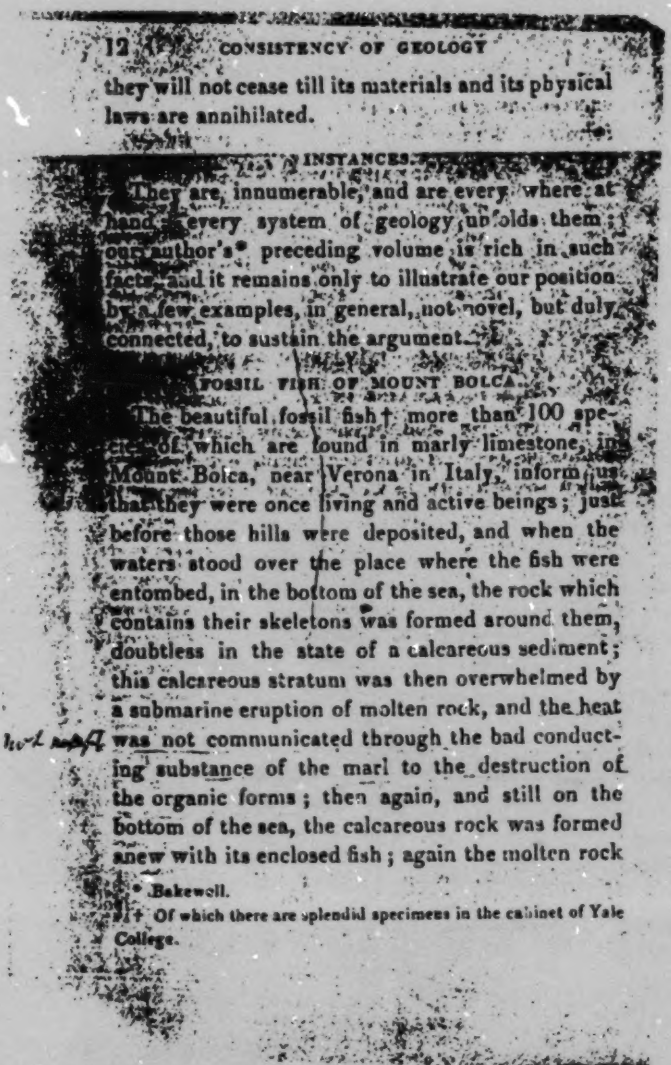
An interesting observation made during the stack survey was that a sizeable number of books (25 percent) have never circulated. (This is not to say that they have not been used or will not be--let us avoid that trap!) We concluded that a significant part of the collection could be removed from primary stack space to a storage location where the books would be available but preserved from the ravages of random access and continual shifting. This would be analogous to the present storage collection, but enlarged and better housed and organized. We also see an extension of the existing "non-repair" collection--all those books too fragile for regular circulation--being a part of the storage collection. By weeding the collection of fragile and lesser-used materials and storing them in a controlled situation (shelved by size in a fixed location)--the fragile ones to be used only on site under supervision, the lesser-used to be delivered to the requestor the same day--the books will be better preserved and prime stack space will be conserved. The "storage" designation will not be permanent (except for the fragile category) so that a book suited to storage this year might be reinstated to the active collection in ten years. Since this will accentuate the existing impermanence of locations, it is suggested that the function of indicating locations be removed from the card catalog and placed on some easily-up-datable (computer produced?) file. At least 30 percent of our bookstock could be placed in storage, thus considerably reducing the need for prime central campus book storage capacity. A public file in shelflist order of the entire collection would serve as a substitute for open-stack browsing of "all the libraries' books."

Having identified some of the preservation problems in the KU library system and made some suggestions for their rectification we now make a final recommendation on implementation: in order for even the most modest conservation program to have any chance of success it must have full administrative support, adequate funding and the responsibility for developing and administering it must be delegated to one person. (Appendix 8). This person should be responsible for coordinating all conservation activities in all parts of the library system, with regular departmental staff reporting directly to him in matters of conservation; he should be charged with developing conservation policies (including contingency plans and cooperative programs) and supervising their application; liaison with Buildings and Grounds for building and mechanical systems maintenance; and should be the interface between the libraries and reprinters and micropublishers, monitoring their promise and performance as regards technical and bibliographical standards. His supervision of "all conservation activities" will include binding operations (in-house and contract), repairs, stack supervision, collection maintenance, screening of incoming materials in Book Selection, Order and Cataloging; he will oversee the conservation workshop and photo-conservation laboratory in KSRL as well as the libraries' photo-duplication services. Support staff will be needed eventually. Too much emphasis cannot be laid on the necessity of the library and university administration believing in whatever conservation program is devised and making a firm commitment to its support, both morally and financially.

The committee did not have an opportunity to make a cost-study, although an earlier proposal which attempted some cost estimates is extant. Even though

the committee recommendations have taken a somewhat different shape from the earlier proposal (for example, the idea of the storage collection--needing staff, supplies and equipment--is new) a summary of that proposal is included. (Appendix 6).

It hardly needs stating that all wisdom and prescience does not abide in this committee. In an age of remarkable technological achievement such as the present it would not be unthinkable that next year some near-miracle restorative treatment which would add 500 years to the life of every book would become available; we would beg to be pardoned for not having foretold it. However, we do not counsel counting on a miracle (in fact, we urge caution in evaluating alleged miracle cures--there are quacks and nostrums in the field of conservation, too) for the deterioration of our bookstock is rapidly accelerating; without an enlightened conservation policy and program we shall find ourselves custodians of a heap of crumbs of used-to-be books.



12 CONSISTENCY OF GEOLOGY

they will not cease till its materials and its physical laws are annihilated.

INSTANCES.

They are innumerable, and are every where at hand: every system of geology unfolds them; our author's* preceding volume is rich in such facts—and it remains only to illustrate our position by a few examples, in general, not novel, but duly connected, to sustain the argument.

FOSSIL FISH OF MOUNT BOLCA.

The beautiful fossil fish† more than 100 species of which are found in marly limestone, in Mount Bolca, near Verona in Italy, inform us that they were once living and active beings; just before those hills were deposited, and when the waters stood over the place where the fish were entombed, in the bottom of the sea, the rock which contains their skeletons was formed around them, doubtless in the state of a calcareous sediment; this calcareous stratum was then overwhelmed by a submarine eruption of molten rock, and the heat was not communicated through the bad conducting substance of the marl to the destruction of the organic forms; then again, and still on the bottom of the sea, the calcareous rock was formed anew with its enclosed fish; again the molten rock

* Bakewell.

† Of which there are splendid specimens in the cabinet of Yale College.

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Preservation

Personnel. To operate successfully within the confines of limited budgets and increased costs, ASU Library must not only cooperate with other libraries in resource sharing programs but also must preserve its existing resources--in the case of irreplaceable materials even at the expense of new acquisitions. Although formal preservation programs do exist for some individual collections in ASU Library, there is no Library-wide program. Understandably then, preservation practices are often inconsistent, and communication about policies and procedures is fragmented and sometimes non-existent.

> Recommendation 22. A preservation officer, or committee, should be appointed by the University Librarian to develop preservation/conservation guidelines, organization, and communication. This person (committee) should report directly to the University Librarian. Additional staff need not be hired. There is also a need for specific written guidelines and preservation program objectives to replace the current informal verbal policies. Target date: July 1, 1978.

Stacks and Circulation. An essential component of any successful preservation program is an effective security system. As a security measure, Hayden Library has only one public exit. This checkpoint is staffed primarily by students, but a recent inventory of selected areas revealed a significant loss of materials.

> Recommendation 23. An electronic exit control system should be installed in Hayden Library. The Preservation Officer (Committee) should be responsible for improving the security systems in the branch libraries. Target date: September 1, 1978.

Although adequate physical housing is essential for the preservation of library materials, space for proper shelving is barely adequate in the general collection and in most individual collections. Curriculum Service and University Archives will need room for expansion within two years, while the Architecture Library, as well as Current Periodicals Service/Reserve, already need extra shelving. Shelving of folios and other oversize or unique materials is inadequate in both the general collection and in all individual collections; the lack of special shelving is a clear cause of damage to these materials. In most areas then, space will be needed in the immediate future. On a positive note, if the new Science Library is built, most of Level Three will be available for expansion.

Recommendation 24. Provisions should be made for additional shelving capability. This cannot be accomplished within the present floor space without sacrificing study space but will require new construction. Adequate shelving should provide no more than six shelves per range and eliminate the need to store larger-than-average books on their fore edges. Shelves should not be loaded beyond their carrying capacity.

Recommendation 25. Budgeting for proper shelving should be secured for all folios in the Library. Shelving should be of the type which allows books to be laid flat. This would necessitate additional shelf space for folios, since no more than three volumes per shelf could be accommodated. The estimated cost of the folio shelving would be $23,000. Target date: fiscal year 1979-1980.

Although the Library has no control over outside damage to circulating books, other than instituting a good instructional program, it can lessen the damage to books at the point of return. Presently, many materials are damaged when jammed into the outside book drops, and others are damaged by the one-foot fall from the inside book drop into the sorting area.

Recommendation 26. The Head of Circulation Service should study and recommend improvements in book return methods. Outside book drops should be eliminated. A book drop should be installed in the mail room with an outside slot to allow the Library to maintain a return location for persons who do not wish to park their cars. The interior book drop should be redesigned to lessen damage to books. A permanent book return installation at the front entrance should be considered. The estimated cost of replacement of these book drops would be $1,500. Target date: July 1, 1978.

Binding and Repair. The primary objective of binding is to increase library materials' durability and permanence; therefore, most items needing repair now are sent to a commercial bindery rather than temporarily being repaired in-house. Major in-house mending would make material available sooner, but experience has proved that much of the material repaired in the Library did not withstand heavy use and then was more expensive and difficult to rebind. In some individual collections, such as Special Collections and Hayden Papers, the major problem is not binding and repair but restoration of fragile and unique materials. Most restoration is done internally, often as a special preservation project; such projects should be routinely budgeted and performed.

Recommendation 27. The current percentage of the Library budget allocated for binding and rebinding should be maintained to reduce the need for in-house repairs.

Recommendation 28. The University Librarian should increase the binding budget to include restoration work, or a separate budget should be instituted for this purpose. Stipulating a specific amount for restoration would help to set parameters within which yearly decisions could be made on a priority basis. Target date: fiscal year 1978-79.

In general, the identification of materials needing repair, particularly when materials are inventoried and when circulating materials are returned, is satisfactory. Although there are no written guidelines, replacement criteria, with the exception of that for missing pages, are also generally good. But written guidelines or specifications, indicating ASU Library's special requirements, should be provided for Roswell Bookbinding, the Library's principal bindery.

Recommendation 29. The Head of Interlibrary Loan Service should develop guidelines for replacement of missing pages. Target date: July 1, 1978.

Recommendation 30. The Heads of Catalog Service and Serial Records Service should send written binding instructions to Roswell Bookbinding. Target date: July 1, 1978.

Microform. Although hard copy purchase continues to be preferred for monographs and heavily-used materials, microform is an acceptable replacement for most other worn materials; therefore, proper and sufficient equipment for the use of microform materials must be provided by the Library. In addition, the purchase of excellent microfilming equipment would enable the Library to preserve its unique and irreplaceable collections: e.g., the Hayden Papers.

Recommendation 31. Better microfilm photographic equipment should be purchased with the advice of the Hayden Papers Archivist. The budget to support microfilming of brittle and disintegrating material should be expanded by the University Librarian within five years. The estimated cost of purchasing such equipment would be $15,000. The possibility of applying for a grant to microfilm the Library's unique newspaper collection and/or the Hayden Papers should be investigated by the Hayden Papers Archivist.

Recommendation 32. Additional microform use facilities should be made available in Reference Service and the Architecture Library. Two microfiche readers, one microfilm reader and one reader/printer, at the approximate cost of $3,500, are currently needed.

Recommendation 33. The proper storage of microfilm, in all locations, should be instituted by the Preservation Officer (Committee). The standards set forth in recognized sources should be observed. Target date: fiscal year 1978-79.

Environment. For ASU Library's preservation program to succeed, environmental objectives must be established, and the following protective measures must be taken:

Recommendation 34. Ultraviolet filters for lights should be provided for the following areas: Special Collections, Hayden Papers, University Archives, and the Arizona Collection. In addition, a feasibility study should be performed by the Preservation Officer (Committee) to investigate the possibility of installing humidity and temperature controls in the above areas. Target date: January 1, 1979.

Recommendation 35. The Coordinator of Administration Services should provide for fumigation of the building, as needed, under safe and comfortable conditions. Second-hand books, especially gift collections, should be cleaned and fumigated upon arrival.

Recommendation 36. The University Librarian should assume the responsibility for supervising and scheduling regular and routine cleaning and dusting of books and shelves, to be performed by employees hired for that specific purpose. Target date: July 1, 1978.

Handling and Care. In some individual collections, there are excellent instructional programs for staff on the proper treatment and shelving of materials; but such programs are not routine in most departments, nor are Library users adequately instructed in the proper handling of materials.

Recommendation 37. The Preservation Officer (Committee) should institute a preservation awareness campaign for both employees and Library users. Emphasis should be on user damage, ranging from carelessness in photocopying to blatant vandalism. Official

enforcement of the regulation against food and drink in the Library should be stressed. Library tours should emphasize the importance of preservation. The staff should be instructed in the proper handling of materials and should enforce regulations. Signs should be posted urging patrons to exercise care in copying. CPS should provide copy services within the current periodicals area. Target date for instituting campaign: July 1, 1978.

Individual collections, particularly those that contain fragile and unique materials, require a staff trained in proper preservation techniques to routinely provide the special care necessary for their maintenance. For such care to be effective, it is essential that appropriate supplies be provided by the Library Administration.

Recommendation 38. The Preservation Officer (Committee) should be responsible for assuring that special care be accorded leather-bound volumes, maps, recordings and tapes, clippings, prints, and photographic materials. Exclusive use of acid-free boxes and folders for storing clippings, prints, and photographs is recommended. Priority should be given to protecting unique and difficult-to-replace materials. An adequately trained staff, as well as appropriate storage facilities and supplies, is required.

Recommendation 39. The Preservation Officer (Committee), working with the Library Administration, should evaluate specific supply needs, including storage facilities (microfilm cabinets, atlas cases, etc.), on an individual basis and take special requirements into consideration. Quality should not be compromised, assuming adequate budget support is available, especially in the area of supplies needed for conservation or preservation work.

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Report of the

TASK FORCE ON PRESERVATION AND SECURITY

November 22, 1977

Submitted to:

Long Range Planning Committee
Duke University Libraries

William A. Gosling, Chairman

Roberta Engleman

Martha Graham

Diane Harkins

Mattie Russell

INTRODUCTION

The valuable collection of books, microforms, and manuscripts which makes up the Perkins Library is in urgent need of protection. All these materials have their natural enemies: the acid contained in the very paper of books and manuscripts that causes them to crumble, ultraviolet light, fluctuations in temperature and humidity within the building, dust, careless handling and crowded shelving all take their toll on the collection. Microforms become scratched and torn if the readers are not kept in order. If the microforms are not regularly cleaned, they are attacked by microorganisms and disintegrate.

A major conservation program needs to be established immediately. Some scarce and valuable items, especially manuscripts and rare books, must be preserved in their original format and repaired. To do this we need a preservation laboratory with equipment to deacidify, humidify, encapsulate, box and rebind. The cost of deacidifying and preserving printed books from the period 1850 to the present is prohibitive. Those items whose value lies mainly in their contents must be filmed to preserve the contents even if the original format is lost. Master negatives should be treated with extreme care and stored under archival conditions. Our collection must be examined by trained staff with the above points in mind if the Perkins Library collection is to have a future.

In addition, better security from theft and mutilation and from fire and water damage needs to be assured. The security of both staff and patrons must be considered as well.

PART I-PRESERVATION

Preservation, or a newer term, conservation, is usually applied to those activities related to protecting paper and binding from decay, especially those materials housed in rare book and manuscript collections. For the purpose of this report the terms will be interpreted in the broader sense to cover the many aspects of preserving the collection, equipment, and physical plant.

Little conservation is being done in the Perkins Library system at this writing. Materials in all parts of the collection suffer from lack of attention. Equipment too is breaking down because of a lack of regular maintenance, and the physical plant suffers from inadequate ventilation and maintenance. Every kind of neglect is reflected in the condition of books and microforms.

Each of these media--books, manuscripts, microforms, and audiovisual material--has its own set of problems. Books in the general collection receive minimal attention now. Generally, only those items which are in poor condition when returned from circulation receive attention in Perkins. A few of the branches are able to review parts of the collection on the shelf for repair, but in a limited manner. Some few brittle paper items are being filmed or xerographically reproduced when they are received. If the original is valuable, it goes to the Rare Book Room. If not, it is discarded. In either case, the photocopy or microform is cataloged and added to the collection.

Once a book is in the stacks, it is subjected to the far-from-ideal conditions of light, temperature, and handling described below. Books in the Rare Book and Manuscript Collections are safer from theft, mutilation, and wear and tear, but the fluctuations in temperature and humidity in the special collections are as unpredictable in these departments as in the stacks.

What is needed

Clearly a major preservation effort must be launched at the earliest possible

moment if the material now in the collection is to last for scholars into the twenty-first century. Under present conditions major segments of the collection will literally turn to dust without such a program.

In order to initiate a preservation program, a national consultant should be hired to identify more accurately the problems documented here. This individual should be able to suggest the proper size and type of facility needed to provide at least minimum preservation services for all types of holdings in the University Library.

RECOMMENDATIONS

1. The ideal: A full-scale Preservation Department should be created. It should be headed by a professional conservator who has the necessary background in chemistry, photoprocessing and preservation techniques to direct a major conservation program. He should serve as the coordinator of the conservation effort, responsible for identifying materials that need the most immediate attention. Working with the general as well as the special collections, he should identify which materials are to be filmed and which preserved in their original format. Fumigating, humidifying, deacidification, rebinding, boxing and mending should be done under his direction. Decisions should be made in consultation with the curators of the special collections and other appropriate librarians.

The conservator should be charged with locating outside facilities to treat or restore material that cannot be treated at the library, such as rare books that need to be completely disbound, cleaned and rebound. He should work with the librarian to secure funds to support conservation programs. After materials have been chosen for microfilming, he should be responsible for overseeing the preservation of the master copy of the microfilm and for reporting it to the National Register of Microform Masters.

In addition to this conservator, an assistant at the professional librarian level, two library assistant technicians and student help should be provided to cope with the overwhelming needs of the Library. One of these staff members should have training in the preservation and maintenance of audiovisual material. The staff should be fully trained in the latest conservation methods, including deacidification, encapsulation, paper and ink conservation and restoration, testing methodology and hand binding techniques.

The equipment in the laboratory should be sufficient for testing and experimenting as well as for repair and restoration of most types of library holdings. The costs of a conservator laboratory, the basic equipment needed for it and related factors are described in Appendix 1.

2. Intermediate choice: Creation of an interim operation working toward a full-scale department dictated by the size of the Library's collection. This shop would require a staff consisting of a conservator, one technician, and student assistants. In this type of shop, as well as the ideal, the following work could be done: deacidify manuscripts, encapsulate manuscripts and fragile unbound printed items in acid free plastic, mend pages in bound volumes, repair bindings, treat leather, vellum and parchment, restore certain types of photographs, dry mount photographs, back maps, make boxes, etc. Those items marked with an asterisk in Appendix 1 represent the minimum equipment needed to support this effort.

3. Minimum choice: One technician should be hired immediately and trained in basic deacidification, binding repair, and other primary techniques. This individual could be assigned to work with appropriate staff who have some knowledge of papers, inks, bindings, and general preservation needs. He could be located in the area of the Marking and Repair Section or in a separate work area, perhaps in the old basement, with sinks and related facilities nearby.

Those items with a slash next to them in Appendix 1 represent equipment

needed to support this level of operation. This level would never be able to cope with the tremendous volume of material awaiting treatment. It might be considered feasible to have the technician screen only recently acquired items upon their receipt, treating those materials which require immediate attention.

Regardless of which level of operation is established at the outset, a continuous effort should be made to upgrade it until the ideal facility is obtained. The Task Force recommends that no action be started in establishing a conservation program unless there is a definite indication of continued support for an ongoing operation. To begin such an operation only to drop it shortly afterwards would be economically inefficient and should not be undertaken. Instead, money should be put into replacing those items in the general collection which have decayed and protecting items in the special collections until they can be properly preserved.

The sulphur found in many book papers, manuscripts and newsprint, when subjected to moisture and excessive temperatures, rapidly produces sulfuric acid which breaks down the paper fibers, producing brittle paper. All materials in the collection can be better maintained and preserved by regulating the current air circulation system in Perkins Library to achieve constant recommended temperature and humidity levels. Recommendations cite temperatures of about 65 degrees and humidity levels of 50 to 60 percent as optimum. These conditions should remain at a constant level, for fluctuating humidity and temperature levels are very damaging to materials. Our current system is totally out of control, not only for the general collection but for rare books and manuscripts as well. Fluctuating temperatures also have a negative impact on the performance of the staff. This environmental control system must be regulated.

RECOMMENDATIONS

1. Ideal choice: The Perkins Library has a very sophisticated air circu-

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lation system. If University staff do not know how to properly regulate the existing system, they should be trained. If this cannot be done, the system should be replaced with a heating and humidity control unit that can be regulated properly. The cost will be high, but without such control conditions such as the following will continue to occur: On July 7, 13 and 14 of this year, the high temperature was 82 degrees. The lowest temperature, 65 degrees was also recorded on July 7 in a different part of the stacks. The highest recorded humidity was 72 percent during that period. The lowest was 52 percent. Such fluctuations are punishing to the material and the staff.

The value of the general collection is estimated to be more than $12,250,000. Add to this an estimated $40,000,000 in rare books and another $20,000,000 or more in manuscripts and the value quickly climbs to $75,000,000. When the value of the branch libraries' holdings is added, we are addressing the problem of preserving an investment of over $100,000,000. Certainly priority should be given to locating the funds necessary to take the basic steps to ensure acceptable environments in which such an investment is housed. East Campus Library problems are addressed later in this report. Of the other branch libraries, the Divinity School Library has had the most problems in the past. All units of the Library system need attention.

2. Limited control: Even if all the buildings that house collections cannot be regulated, a separate dedicated temperature and humidity control unit should be installed to provide regulation of the environment in those areas housing rare books, manuscripts, art materials, microforms and audiovisual material. The cost of installing a system to regulate the Rare Book Room is $34,418 (April 1977; adjusted to October, the cost is $35,463.53 or one-half of one percent escalation per month.) Similar costs can be provided for other areas by Ronald Wilson of the Physical Plant Department. The longer it takes to implement such a system, the greater will be the number of items that require

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more extensive efforts to preserve them. The cost to secure such a system will be greater each month installation is delayed.

East Campus Library Control

The most pressing needs of the East Campus Library are for more space and an air-conditioning/humidity control system. The art stacks (exclusive of the art folio room) do have air-conditioning but no humidity control. That air-conditioning system is very old. Water leaks from it onto the books and damp plaster crumbles onto all the books shelved along one wall. Fungus grows on the books in the rest of the stacks. In addition, the building itself leaks. The artifacts, especially the Chinese furnishings of the Thomas Room are in need of restoration. See Appendix 2A for photographs illustrating these problems.

The East Campus Library has its own repair operation. All books are checked for damage at the time they are returned. Rebacking, sewing, strengthening of hinges and mending of pages are done there. Leather binding are regularly oiled with vaseline.

RECOMMENDATIONS

1. An air-conditioning/humidity control system should be installed throughout the building as part of a total building renovation program.

2. Repairs should be made on the building itself to stop leakage.

3. The overcrowding in the stacks should be alleviated.

4. An area should be set aside for the proper storage of microforms.

5. Funds should be allocated for the restoration and maintenance of the paintings and artifacts, especially those of the Thomas Collection, before they deteriorate to the point where they cannot be saved.

The Stacks

As the photographs in Appendix 2B illustrate, much can be done through

an improved stack maintenance program to aid in conserving the collection. A full-time professional staff member dedicated entirely to circulation and stack activities has been appointed which should aid the situation. It is apparent that the number of student assistants for shelving, reading the shelves, and straightening the books needs to be increased. It also appears that a more extensive training program is needed for student assistants to make them more fully aware of simple techniques, such as straightening each shelf as a book is returned to it, which can aid in maintaining the physical condition of the collection.

RECOMMENDATIONS

1. Immediate steps should be taken to adjust the shelving so that folio volumes will lie flat rather than vertically on shelves too small to hold them.

2. No volumes should be shelved standing on their fore edges. When a volume will not stand properly it should be returned to the Catalog Department to have records adjusted and the volume remarked. (It will be impossible to avoid this situation with some serial titles if individual pieces vary greatly in height.) There should be a survey of the stacks to identify all volumes currently on their fore edges. Such books should be removed and properly shelved in the next larger section after being remarked when necessary. Areas should be expanded where, because of crowding, shelves of books have been placed on their fore edges to save space.

3. The bound periodicals should be reviewed. Folio volumes should be reshelved in a separate section rather than jammed onto shelving too small to accomodate them, as is currently done.

4. It is recommended that the size guidelines for quartos be changed from 26 or 28 cm. to a standard 30 cm. height to facilitate more material being shelved together in all collections. A standard page size is 28 cm. tall and is frequently increased slightly by binding or placement in folders. These

borderline volumes frequently are placed on the smaller size shelves, resulting in their being jammed in or laid on their fore edges. Either situation increases the likelihood of physical damage and decreased shelf life for the volume.

A possible extension of this concept is to eliminate the quarto size as a separate designation, combining and shifting the collections accordingly. This would facilitate patron use of the collection and help retard physical deterioration, especially for 28 cm. books now jammed into current shelving heights.

5a. More book ends are needed throughout the stacks. A supply is available in the "pit" on the subbasement level.

b. Serials in boxes need to be removed and either bound or put into pamphlet binders. This material at present is often found filed in the wrong box, torn, curled or otherwise damaged.

6. Student assistants should be more fully trained to expand sections and adjust book ends and shelves when space needs to be created to add new titles. A basic training program should be established covering the points made above. Their training should also include information on how their work affects preservation. Current conditions in the stacks may be a reflection of staff shortages rather than training programs, though it appears to be a combination of factors.

7. The metal shelving in Perkins has been painted with inferior paint. All types of binding sticks to the shelves although they are less than ten years old. The shelves should either be treated with a nonacidic, nonstick coating of some sort or replaced with shelves that have a better finish. Either solution is expensive and time consuming. Cost figures are not available within the limits of this study, but treating the shelves appears to be the more efficient method.

8. Ultraviolent rays aid in the decay of all library materials. Filters

to screen out the ultraviolent rays should be secured for all fluorescent lighting fixtures and windows in areas where materials are shelved, hung on the walls, or exhibited. An inexpensive filter made of vinyl film is described in the June 1, 1977 issue of Library Journal, page 1261.

9. A policy statement should be developed governing the control and preservation of library property stored outside the system for extended periods, such as the Wesley material in the Baker Collection, which is still housed in the Divinity School.

10. A variety of special materials in the Manuscript Department needs to be surveyed and a special program for their preservation established. Of most urgent concern are those highly explosive films on nitrate stock currently stored in that department. This material is so volatile that many libraries will not allow such materials to be stored within buildings that house other library collections. This material should be reviewed and a conversion project to safety film begun. In the meantime, a safer storage facility should be found for it.

11. The interlibrary loan policy should be reviewed to ensure that scarce and fragile material are not circulated through the mail. A revised set of written guidelines should be supplied to the Interlibrary Loan staff and more strictly enforced. Additional training should be provided for the staff so that they may identify more easily the materials which should not circulate.

12. A program of repair and maintenance should be established for the entire collection of art works, antique furniture and objets d'art. Particularly valuable items should be encased or otherwise protected from vandalism and careless damage. Should the items no longer be needed by the Library, they should be transferred to the Art Museum or other appropriate departments of the University, or sold at auction, the proceeds going to support needs identified in this and other long range planning reports.

13. The buildings themselves all have flaws. A survey should be made of major and minor maintenance needs and a program established to see that proper maintenance is carried out. Library equipment is also sadly antiquated. A full scale program needs to be initiated to inventory equipment, including typewriters, microform readers, desks, chairs, etc., documenting their condition and identifying those items needing immediate replacement. A depreciation program based on University guidelines should be established for the remaining materials, to be followed when the initial replacement effort is completed.

Microforms

The microform collection is subject to the same conditions of temperature, light and humidity as the books. There is no protection from water damage, which is the worst enemy of microforms. The film is susceptible to fungus growth and no cleaning operations exist. Antiquated equipment often scratches or tears the film. White fluorescent lighting is especially harmful to certain types of film.

RECOMMENDATIONS

1. Provide carbon dioxide extinguishers for fire.
2. Take precautions against the leakage of water from the ceiling.
3. Store microfilm in nonacid containers.
4. Purchase a film cleaning machine and institute routine cleaning procedures.
5. Provide for careful machine maintenance.

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A Report of a Survey

at the

University of Utah Libraries

3 October 1977

This report includes observations and recommendations applicable to all of the collections in the Marriott Library but the emphasis is on the materials and their environment on the fifth level of the building - Special Collections including the Middle East Library.

ENVIRONMENT CONTROL

The "air-conditioning" in the library is well designed from the point of view of "creature comfort" but leaves much to be desired from the point of view of conservation of library materials. The reason for this is that there are no provisions in the system for the control of humidity other than the chilling effect of the cooling coils which condense excess moisture out of the circulating air. This condensation being uncontrolled results in continuing variations in relative humidity which in turn create frequent dimensional changes in paper, cloth, leather and other library materials which are a principal cause for the physical destruction of organic materials. During the heating season the lack of humidification units in the system results in low humidity in the circulating air which desicates organic materials resulting in further damage. The relative humidity in the building on the day of the survey ranged from 20-26% which is far below the recommended 50%±5% for the preservation of library materials. Furthermore this suggests that as the heating season continues the relative humidities will continue to decrease to as low as 5-10% which is most unsatisfactory for library materials. The practice of turning off the heating and cooling system during non-working hours acerbates this problem by adding diurnal dimensional changes (as the temperatures rise and fall) to the changes already taking place because of the lack of humidity control.

The water scrubbing towers on the roof of the building are an effective method for reducing the amount of dust and carbon aerosols in the circulating air to a minimum. This is most important from the point of view of conservation as well as housekeeping and will over the years result in reduced cost for rehabilitation of library materials that would otherwise be damaged and disfigured by these pollutants. It is recommended that consideration be given to the "alkalization" of the scrubbing water in these towers to remove the nitrogen and hydrogen (and their oxides and sulfides) common in urban air which when absorbed by library materials are converted to destructive acid. Information on alkaline water scrubbing is available from air conditioning engineering firms in Salt Lake City.

It is realized that the cost of the addition of humidifiers and dehumidifiers in sufficient numbers throughout the library to maintain an overall relative humidity of 50%±5% day and night throughout the year would be prohibitive. However, it is recommended that serious consideration

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be given to the addition of humidifiers and dehumidifiers (and associated controls) to the system on the 5th level of the building which contains the rare and valuable materials in Special Collections including the Mid-East Library. It is also strongly recommended that the practice of turning off the "climate-control" system during non-working hours be discontinued. The additional costs for heat and power to maintain a constant temperature of $68^{\circ}\pm2^{\circ}$F and a relative humidity of 50%±5% day and night 365 days a year will be recovered many times over in years to come in reduced costs for repair and restoration and replacement of the wide range of book and non-book materials now in the library.

Of almost equal importance to the control of heat and humidity is the control of light. The ultra-violet energy associated with sunlight and the illumination from fluorescent lighting tubes actually ruptures cellulose molecules in paper and is a principal cause for fading and discoloration of materials exposed to natural and artificial light. The energy in the blue and violet components of light are almost equally destructive. Fortunately this ultra-violet energy can be relatively easily controlled by the use of filtering materials on windows; ultra-violet filtering sleeves on fluorescent tubes or ultra-violet filtering plastic double glazing on the diffusers of recessed fluorescent lighting fixtures. This is desirable treatment for all of the windows and artificial lighting in the library. However, from the point of view of economy in the beginning it is recommended that remedial action be on the 5th level in the areas containing the Special Collections and the Mid-East Library rare book room (#536) and the Fine Arts area on the 4th level. Specifically it is recommended that the windows be coated with an ultra-violet filtering varnish (attachment A) or ultra-violet (and blue and violet) absorbing plastic film (attachment B) or double glazed with ultra-violet filtering plastic sheeting (attachment C). The cost increases in that order as does the effectiveness. It is also recommended that all of the recessed lighting fixtures in Special Collections, Room 536 and the Fine Arts area be double glazed with 1/16" ultra-violet filtering plastic (attachment C). It is further recommended that over a period of years all of the windows and fluorescent lighting fixtures in the library be so treated.

It is recommended that the conservator be authorized to purchase a photometer to monitor the lighting conditions in the various areas of the library and to help him establish priorities for the control of light in these areas (see attachment D).

SECURITY

Security from theft and vandalism and the devastations created by fire, water and windstorm is a conservation administration problem. It is a little known but inescapable fact that the annual destruction of library materials in the United States by these misfortunes alone exceeds the losses during the highly publicized floods in Florence in 1966. Security from theft and vandalism in the Marriott Library is minimal because of the lack

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of burglar alarms and the facts that the building is vacant from 4-7 AM daily and only sparsely occupied by maintenance staff from 11 PM to 4 AM daily. Because of this there is nothing to deter professional thieves from taking what they wish whenever they wish and nothing to stop senseless vandalism by disgruntled people who for one reason or another want to "wreak vengeance on the system". This is particularly serious on the 5th level and the Fine Arts area on the 4th where the libraries rare, valuable and often unique materials are kept. The locks on the entrances to these spaces will be of little help when intruders can operate for hours with little fear of detection.

It is strongly recommended that intruder alarms be installed on all of the exterior entrances to the building and motion detectors be installed at selected areas within the building to detect intruders who may by-pass the alarms on the entrances. It is further recommended that these devices be connected to the campus security office. If a total security system is not feasible it is recommended that intruder alarms and motion detectors (connected to the campus security office) be installed in Special Collections, the Mid-East Library, and the Fine Arts area on the 4th level.

The fire alarm system with heat sensing devices connected directly to the campus security office is good. The system for fire detection would be excellent if the heat sensors were augmented with or replaced by smoke sensing devices which because of their extra-sensitivity will warn the security forces much sooner that there is trouble in any part of the library.

The fact that there are no sprinklers in the library (other than in the dock areas) and that the standpipes are empty except when required for fire suppression is good. All too often (particularly when heat and smoke sensors are installed) damage by water used to quench a fire exceeds the damage done by heat and flames. It is recommended, however, that the library managemnt consider the installation of a halogenated fire quenching system for the Middle East Library Rare Book Room (#534), and the other Special Collections areas in which even a minor fire could cause costly damage to the library's rare and valuable materials. Information on these systems is available in Salt Lake City from the city fire department or from commercial companies specializing in fire prevention.

A matter of concern for which there appears to be no practical solution is the fact that the steam pipes delivering heat energy to the hot air diffusers throughout the building and many water pipes are in the ceilings of the five library levels. Everyone of these steam and water pipes is a major threat to the library materials below them. On the day of the survey there was a leak in a steam pipe over the Special Collections stacks which required a plastic sheet over the book cases in the immediate vicinity to prevent water damage to the books on those shelves. This unfortunate "plumbing" arrangement requires constant vigilance on the part of the building engineer and the maintenance staff and regular organized inspection of the entire system for early detection of faulty valves, leaking joints, etc.

It would also be well for the building engineer to consider the design and fabrication of unobtrusive water deflectors that could be installed on the top of the book cases and cabinets in the stack areas and perhaps behind the suspended ceilings in other vulnerable parts of the library particularly in special collections, the Middle-East Library, and the Fine Arts Area. Although it is well-nigh impossible to relocate the steam pipes, diffusers, air-ducts etc. used for heat distribution and cooling it would be wise to consider rerouting any water pipes to and from the rest rooms etc. that may pass through the Special Collections Areas.

STORAGE

Storage facilities throughout the library are generally excellent. The steel book cases and cabinets are of high quality, sturdy, fire resistant and well designed to minimize accidental damage to materials placed in them. Because the water scrubbing towers and the mechanical filters on the roof remove almost all of the dust, dirt and foriegn matter from the circulating air and make up air in the climate control system there is very little accumulation of dust on the shelves, the top of books, working surfaces, etc. There is overcrowding in some areas which is inevitable in any major library with ever increasing collections but that is a management program that can be resolved in-house. It is recommended that early consideration be given to providing adequate shelving for oversize books. In several areas it was noticed that some books had to be shelved standing on their fore edges because the shelf spacing (height) is inadequate. This puts great stress on book covers (particularly art books with glossy coated paper pages) and inevitably results in the necessity for costly rebinding much sooner than for other books.

It is recommended that the many acid cardboard 10" x 13" x 16" utility boxes now in use in the archives be replaced as soon as possible with archival quality document storage boxes available from several sources. For some reason in Rare Book Room West on the 5th level one fluorescent light on the ceiling is kept on 24 hours a day seven days a week. The wiring for this lighting fixture is separate from the other illumination wiring in this room. It is recommended that in addition to double glazing the light diffuser in this fixture (as previously recommended for all lights in special collections) that this particular fixture be rewired to go on and off with the other lights in this room.

CONDITION OF THE COLLECTIONS

Because of the multitude of books and non-book materials on the various levels of the Marriott Library it would be impossible (even if unlimited funds were available) to give each and every item the prefered treatment to prolong their useful lives and insure the availability of the information for generations to come. It is necessary to recognize the fact that for the great majority of the collection (the US and UN Documents, on the second level; Science and Engineering Material on the first; the periodicals on the fourth; the Rand Corporation Research Collection; and the audio-visual

materials etc.) preventive conservation is the only realistic "treatment" until research currently underway at several places in the United States and else where perfects a method for the mass deacidification of books to neutralize acid in book paper which is the arch-enemy of librarians. It is comforting, however, to realize that without exception the greatest return for librarians conservation dollars is realized from "investments" in environment control including the stabilization of temperature and humidity and the control of light. Temperature control at 68°F-2°F and relative humidity control at 50%-5% day in and day out three hundred and sixty-five days a year is just as important for the tens of thousands of tape recordings, films, microfilms, vidio and audio cassettes, film strips and loops, record discs etc. as it is for the printed books, manuscripts and other paper, cloth and leather items.

After maximum effort to improve the environment the conservation department with strong support from the library administration must concentrate on the materials in Special Collections which because of their age, rarity, extra importance, great value, and chemical and physical condition require special attention. Here too the magnitude of the task is great and the utmost in management as well as technical expertise is demanded of the staff conservator to insure the maximum return from the funds and manpower available. Much of the conservators effort must be devoted to the supervision of others (permanent assistants if any, student employees, and volunteers). The conservator must of necessity spend a significant amount of time monitoring the environments throughout the library for early detection of unacceptable temperature humidity and lighting conditions. He must be constantly alert for evidences of unwanted moisture, insects, fungi, rodents, and cooperate with the Superintendant of Maintenance in the establishment of inspections on a regular basis of every space in the library in which book and non-book materials are stored.

A good point of departure for a long-range "in-house" program would be the establishment of at least one "book preservation team" the function of which would be the rehabilitation of deteriorating book covers (see NEDCC suggested procedures Attachment E). This team (or teams) could be composed of student employees working under the overall supervision of the staff conservator. It would be logical for that team to start its work in the Document stacks (caged area) on the second level where so many of the bound volumes have bad leather bindings or dilapidated cloth covers. When the books in that area have been treated and the team members develop skill and confidence in this work they could move into Special Collections to apply themselves to the covers of the cloth and leather bound volumes in the Middle East Library Stacks, the Western Travel and Exploration Materials, the History of Science volumes, Walter Camp Collection etc. (They should not be expected to work on the volumes in Rare Books East and Rare Books West, the Vault or the Middle East Rare Books Room #536 until they have gained considerable experience.) It is envisaged that this team would be a permanent feature of the Library moving on the other levels where needed when they have completed their

task in Special Collections. Ideally the two or three team members would be from separate classes so that there would be continuity in experience as the students graduate. One function of the team in addition to their cleaning and refurbishment of bindings would be to "spot" and bring to the attention of the chief conservator those books in need of more than routine attention.

The condition of the materials in the archives is similar to collections in other major university libraries. The chemical and physical condition of these records varies from excellent to poor. Many will need nothing other than "tender, loving care" for many years to come particularly if the temperature and humidity control on the fifth level is improved as recommended earlier in this report. Other materials are in need of priority attention almost all of which is available in the libraries preservation workshop. That attention consists of removal with solvents of pressure sensitive tape, cleaning, aqueous and non-aqueous deacidification, mending and reinforcement, and encapsulation in polyester sleeves for more fragile items. The identification of the items requiring attention and the establishment of priorities must be determined by the combined experience of the archivist and the chief conservator. Typical examples of materials that require priority attention are:

(a) the correspondence, broadsides, newsprint etc in the Joseph E. Johnson papers (cleaning, deacidification, mending, etc.)

(b) the many pressure sensitive tape "mends" on the LeRoy Robertson Papers MUST be removed as soon as possible.

(c) the Golden Spike Centennial Scrapbook should be spray deacidified to arrest the acid hydrolysis in the scrapbook pages and the materials mounted on them.

Most of the rare and valuable maps in Special Collections can be treated in the library's preservation work shop to arrest deterioration and prolong their useful lives. This treatment should include as required, cleaning, deacidification, reinforcing with good quality paper, and polyester encapsulation for the smaller items. Seriously damaged maps can be sent to the New England Document Conservation Center for professional treatment. (see estimate)

The "Utah" pamphlets are well kept in their acid free folders and archival quality storage boxes and are in need of no treatment at this time.

The text and plates of the Cellarius in the vault are acid contaminated but otherwise the binding and contents are in good condition. Spray deacidification in the library's workshop (after testing the solubility of the colors on the plates) is recommended.

The three volume McKenney Hall Indian Tribes are in need of major treatment to clean and deacidify the plates (after disassembly of the book)

reduce the stains, mend and reinforce the text and plates and rebinding in a facsimile of the original covers (or salvaged original covers). However, it is recommended that this be deferred at this time and that the text and plates be spray deacidified with magnesium methyl carbonate to arrest the acid hydrolysis now taking place until full treatment can be accomplished by the conservator.

The Bodmer prints for von Wied-Neuwied's Travels in the Interior of North America are also acid contaminated and have some foxing (fungus) stains. Since there is almost no possibility of increased fungus growth in the present environment sterilization is not required. However, deacidification is necessary to preclude brown staining and paper embrittlement by acid hydrolysis. The uncolored engravings can be deacidified "in-house" by soaking in magnesium bicarbonate solution. This will also clean and freshen the paper to a considerable extent. The colored engravings can be deacidified "in-house" by spraying with magnesium methyl carbonate (after testing the colors on each print for solubility in the spray solvents). It is further recommended that all of these prints be encapsulated in polyester film (Mylar) before returning them to their cloth portfolios.

With the exception of the papyrus collection the materials in the Middle East Rare Book Room are in less satisfactory condition than the other Special Collections. These papyrus documents each sandwiched between glass plates and kept in steel cabinet drawers are well preserved and in no need of attention at this time. The condition of the parchment and leather scrolls in this room is another matter. These are heavily worn, soiled and stained, and have become embrittled with age and because of acid hydrolysis. Professional treatment is recommended for these items. (see estimate)

The Persian newspapers printed on inferior paper have been microfilmed and the information in them preserved. However, if it is the intention to keep these newspapers in the collections it is imperative to spray deacidify each page to salvage what is left.

The approximatley sixty loose leaf binders in Room 536 each filled with single documents each in a plastic sheath are protection for the documents from damage by handling. But here too the paper is acid and becoming increasingly more brittle with the passage of time. These documents can be cleaned, deacidified, encapsulated in polyester film (attachment F) and replaced in their present folders.

The rather dilapidated covers on the books in Room 536 call for a boxing program (attachment G) as an interim measure until these important volumes can be professionally restored or restored in the library's preservation workshop.

The bound volumes, mounted art reproductions, music scores, architectural material etc. in the Fine Arts Area on level 4 will benefit most by improved temperature and humidity control but aqueous and non-aqueous deacidification will arrest the acid hydrolysis which is staining and embrittling some of these materials.

The two "Mormon Globes" on display on level 3 are in very bad condition due to long neglect and abuse. The paper gores on the plaster spheres are abraded in places to the point where information has been lost. Long exposure to light has faded the colors. The plaster on each sphere is cracking and the brass meridian circle for the terrestrial globe is missing. Professional treatment is recommended (see attachment).

The plates in those atlases in the cartographic area on level 1 that are intended for permanent retention should all be spray deacidified to prolong their useful lives and postpone as long as possible the costly repair and restoration that is inevitable for reference volumes such as these. The chief conservator should periodically inspect these volumes and as necessary do minor repairs on the spines, covers, end papers, etc. to provide maximum pages for the plates which are particularly vulnerable to damage because of the characteristics of atlas construction, the weight of the texts and plates, and the heavy use they receive.

The storage for the approximetely 80,000 loose maps in this area on level 1 is excellent. Little can be done, however, to reduce wear and tear on these easily damaged sheets. Fortunately, a great many are replaceable at less cost than would be required to restore them even in the library's preservation workshop. The practice of "protecting" these loose maps with self adhering clear plastic sheathing is of questionable value for expendable items and dangerous for non-replaceable materials. It should be discontinued.

Earlier in this report the responsibilities of the chief conservator and his assistants were summarized (page 5). It is equally important that the senior administrative staff recognize their responsibilities in the area of conservation. They are to create an awareness and understanding of the importance of conservation amongst the older and younger staff; make a knowledge of preventive conservation measures one of the requirements for advancement; support the conservation staff and encourage them to continually improve their professional and technical competance; and obtain university funding for refining the heating and air conditioning system, to improve the environments within the Marriott Library; budget for the control of natural and artificial lighting within the library; establish a suitable intruder alarm system.

The problems facing the Marriott Library staff are great and their magnitude and cost would be overwhelming if it was expected that the job be done in the next year or two. That is completely unrealistic. However,

if this challenge is regarded as one to be overcome over a period of 10, 15 or even 20 years then it is realistic from thepoint of view of available labor and cost. It is the responsibility now of the library administration to accept or reject the recommendations herein; establish priorities for treatment (in-house and by professionals) for restoration of damaged materials; establish priorities for improvement in environment control and set up a time frame for all.

George M. Cunha, Director
New England Document Conservation Center
12 December, 1977

Attachments:

A - Ultra-violet filtering varnish

B - Ultra-violet filtering film (Solar Screen)

C - Ultra-violet filtering sheet plastic (Rohm & Haas UF-3)

D - International Light - PHOTOMETER

E - Book maintenance instruction CF STORAGE - STACK MAINTENANCE

F - Polyester film encapsulation CF PAPER - ENCAPSULATION

G - Boxing Instructions (L.C. PHASED PRESERVATION BOXES)

H - Estimates for professional restoration

1. parchment and leather scrolls
2. rare maps
3. Mormon Globes

I - The Records Center - the Museum of Natural History

J - Survey notes and observations

GMC:mak

I

The Records Center - Museum of Natural History

Whereas the situation at the Marriott Library is generally good in regards to conservation conditions at the records storage area (in the basement of the Museum of Natural History) where all of the University's current (up to 7 years) working papers are stored for "safekeeping" are not satisfactory.

Massive overcrowding of the various areas in this basement space with fully loaded highly flammable boxes is the principle problem. The vulnerability to fire is great and the probability of fire is higher than normal because of the age of the general wiring system and the "jury rig" electrically overloaded extension cords which convey electricity across, around and through the flammable boxes to a coffee maker, refrigerator, radio and a microfilm reader. Steam and water pipes throughout the area are a hazard that could in the event of a failure require the expenditure of tens of thousands of dollars to salvage the data on water damaged records. There is evidence of rodents and insects. The unstable temperature and humidity for these "current" records is not the major problem here that it is the library but the effects on records are the same - accelerated deterioration.

The requirements in this records center are to:

(a) create more space for the ever accumulating paper by culling the material there or preferably finding a more suitable location for this important function of the university

(b) reduce the fire hazards by removing the "extension cords" to the various appliances or putting in additional underwriter approved wiring and outlets to service them.

(c) periodic treatment by professional exterminators to control the insects and rodents.

George M. Cunha, Director
New England Document Conservation Center
December 12, 1977

GMC:mak

SURVEY REPORT

WESTERN STATES MATERIALS CONSERVATION PROJECT

The work herein reported was sponsored by the Western Council of State Libraries, Inc., and supported with funds from the Western Council and a grant from the National Historical Publications and Records Commission.

Howard P. Lowell
Karen Day
Denver, Colorado
April 21, 1980

INTRODUCTION

The Western States Materials Conservation Project, spcnsored by the Western Council of State Libraries, Inc., and funded with a grant from the National Historical Publications & Records Commission, has four objectives:

1) To develop an informed cadre of conservation conscious librarians, archivists, and manuscript curators in each Western Council state who are committed to, and will work for, conservation solutions on a local, state, regional, and national basis;

2) To survey, and report on, conservation issues, constraints, potential solutions, priorities, alternatives, available resources, and the feasibility for a variety of coordinated conservation activities in the West;

3) To develop, by consensus and in priority sequence, a cooperative, coordinated conservation action plan for the West;

4) To plan, as appropriate, inmplementation of the conservation action plan developed.

To meet the first two objectives, project staff visited all but one of the eighteen western states now participating in the project. These states are: Alaska, Arizona, California, Colorado, Idaho, Iowa, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Utah, Washington, and Wyoming. Kansas joined the Western Council too late for a stafi visit during that part of the project, but staff may hold a meeting there after June 1980. At each state meeting, participants were asked to:

1) identify conservation resources and programs within their institutions and the state;

2) define conservation needs within their state; and

3) begin to identify what actions they could take within their state.

Participants also identified needs that they could not begin to act upon for a variety of reasons.

To achieve the project's stated third objective, a Feasibility Colloquium will be held on June 8-10, 1980, at Snowbird, Utah. This SURVEY REPORT has been compiled for the purpose of assisting Colloquium participants by providing comparative information from the various state planning meetings, and staff interpretation of project findings, through April 1980. The project's fourth objective will be met by various staff activities that will be based upon the action plan developed by Colloquium participants.

DATA SUMMARY AND STAFF INTERPRETATION

A total of 454 people have participated in twenty state meetings. Three states held two meetings each, due to their geography. Among the participants college and university librarians formed the largest number, about 23.7%. Archivists and records managers comprised the next largest group, 18.7% of the participants. The third largest percentage was 15.1%, and consisted of city, county, and regional librarians. The fourth largest participant group was historical society staff, who formed about 10% of the total. Further information about participants is included in the appendices to this report.

Staff analysis of the states' listed "NEEDS" and "ACTIONS . . ." has caused us to conclude that there have been three major areas of concern shared by all participants:

1) Information and Education;
2) Conservation Services;
3) Research, Standards, and Legislation.

The three major areas identified are a result of staff review of completed survey questionnaires, the documentation from each state meeting, and discussions with archivists, librarians, and conservators throughout the West, some of whom did not participate directly in project activities. As project staff did not provide predetermined categories into which participants had to fit their needs and actions, consolidation of peoples' varied articulations into a few major categories has been difficult.

Information and Education: communication, training, public relations, a clearinghouse function, conservation advocacy and interest group.

Participants in the planning meetings wanted a greater exchange of information; improved access to resource people and institutions; and help with developing techniques to communicate more effectively with their administrators, staff, other professionals, the public, and legislators. Some participants gathered these elements under the umbrella of a clearinghouse for conservation information.

Conservation Services: adequate microfilm service, disaster preparaedness and assistance, basic training, statewide conservation plans, institution and statewide survey, cooperative projects, access to conservation consultant expertise, access to a conservation lab and staff.

This broad category includes participants' expressions of needs for survey consultants, basic staff training in preventive measures and conservation techniques, and the development of both institutional and statewide conservation plans. It also includes the concept of conservators who come to the work, instead of doing all the work in one location. Numerous programs have been proposed that could lend themselves to varying degrees of cooperation, for example microfilm: processing; services offered to other institutions; and bibliographic access to microfilm. Also frequently mentioned were a last copy depository, cooperative collection development, and cooperative storage facilities.

Standards, Research, and Legislation: improved facilities, standards, legislative proposals, national research program, last copy depository, collection development cooperation, records management programs, improved paper quality.

A majority of participants have felt that a lack of suitable standards for materials conservation such as paper quality, environmental controls, conservator training, and permanence and durability of non-print media, have impeded development of conservation programs. Related to that issue is the expressed need for basic research, and for a generally accepted and affordable system of

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mass deacidification. Legislation is viewed as important because of its relevance to adequate public records management, the establishment of standards, the potential for funding support of conservation activities, and as one possible method of supporting conservation education for administrators and conservators.
Matrices reflecting staff information about each state's resources, conservation needs, and potential actions, complete the appendices following this report.

FEASIBILITY COLLOQUIUM

In order to develop a realistic approach to coordinated conservation action in the Western United States, project staff has designed a format for the Feasibility Colloquium that will provide time for large group meetings and small group discussions. Staff would suggest that some specific questions be addressed by participants as they meet, and particularly within the small discussion groups. The questions include:

1) What local or state programs currently exist that have potential for a regional impact?
2) What can be accomplished now through regional cooperation?
3) What are the significant inter-relationships among the three major topics being discussed?
4) What are the most important needs in each of the three broad topics that would be the most appropriate candidates for outside funding?
5) If a regional approach to any one or all three of these general topics seems viable, what organization or institution would be appropriate to assume a coordinator's role?
6) What topics would best be served by working toward development of national policy, rather than by attempting to promulgate a local or regional policy or policies?
7) What commitments to follow-up, if any, are participants in this Feasibility Colloquium, or their institutions and associations, prepared to consider?

July 1, 1980

WESTERN STATES MATERIALS CONSERVATION PROJECT

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FOR IMMEDIATE RELEASE

One of the more significant meetings in the brief history of the materials conservation and preservation movement in the United States occurred on June 8-10, 1980, at Snowbird, Utah. Representatives from institutions in 18 Western States attended the Feasibility Colloquium of the Western States Materials Conservation Project. Among the institutions represented were public, state and university libraries, historical societies, archives and museums. After meeting for two and one-half days, participants arrived at a consensus on a master plan for preservation and conservation of materials in the West that includes recommendations for both short and long-termactivities from local to national levels. The group also issued a series of policy statements impacting such diverse areas as research, funding and legislation.

As the first part of a long range objective to implement effective conservation practices in the Western U.S., participants called for the creation of a regional conservation clearinghouse. An advisory group of the Western Council of State Libraries, the sponsor of the Colloquium, was charged with the development and establishment of the clearinghouse. Some of the initial responsibilities of the clearinghouse will be to address needs for training and education within the region and to initiate the formation of a conservation advocacy network. Later stages of the master plan call for a collective materials insurance pool, a master microfilm depository and eventually for conservation laboratories.

Colloquium participants also formulated strong policy statements on the needs for a national conservation research program; publication of national standards; development of national, regional, state and local public policy; & legislation regarding conservation practices.

Recommendations for immediate actions included commissioning studies by the Western Council on specific aspects of the "state of the art" of conservation, establishing relationships with other relevant national groups like the Society of American Archivists and the American Library Association, and developing an advocacy network which could work toward the implementation of standards.

Specific recommendations for legislation included a suggestion that the Western Council should appoint a committee to draft a national conservation public policy statement which would support a wide range of funding efforts, in addition to those of the National Endowment for the Humanities and the National Historical Publications and Records Commission. Colloquium participants and the Western Council were also called upon to urge the adoption of uniform standards at state and local levels, and to pursue implementation of a new federal law requiring Library of Congress copyright copies to be submitted on durable, permanent paper.

Near the end of the Colloquium, participants ensured the continued impact of decisions made during the meetings by voting to form the Western Conservation Congress. Members of the Congress will be drawing up a constitution and by-laws during the coming year and will meet again during the American Library Association and Society of American Archivists conventions in California in 1981. The group also resolved to make known to the U.S. Congress and President Carter the need to increase the funding of NHPRC to approximately twelve million dollars in order to address acute historical records problems. Another resolution was to endorse NEH's request for a new budget line item for conservation in its fiscal 1981 budget in the Research Resources Program of the Division of Research.

Although Colloquium participants did not vote on the matter, there was informal consensus that the most effective conservation actions are those that can be implemented and funded at the local level. A shared concern throughout the two-day meeting was that the master plan needed to be realistic and that parts of the plan should be designed so as to be possible for immediate implementation.

PROGRAM AND POLICY STATEMENTS

UNIVERSITY OF CONNECTICUT LIBRARY

A PRESERVATION PROGRAM

PROPOSAL

One of the fundamental elements of the University of Connecticut Library's mission is to provide "A comprehensive collection of current and retrospective materials in any and all forms needed to meet the present and future requirements of users."[1] In addition, a major objective is "to strengthen and extend the capacity of the Library to identify, preserve and provide recorded information to users regardless of changing fashions and scholarships."[2] (Emphasis mine)

The last 15 years have witnessed substantial growth in the Library's collections at Storrs from approximately 1/2 million volumes in 1965 to over 1 1/4 million volumes in 1979. Today the Library is also acquiring significant amounts of non-book formats including audio-visual materials, maps, microforms and even a few computer tapes. Great efforts have been made to acquire materials to build a comprehensive research collection but very little emphasis has been placed on preserving the collection for future use.

It is becoming increasingly obvious that a large portion of the Library's collections are in poor physical condition. The process of planning for and moving into the new library building and the placing of the entire collection together in a highly visible arrangement have made the problems more noticeable. One needs only to walk through the stack areas, especially where the science materials are shelved, and to examine books which borrowers have returned, to be aware of the deteriorated condition of the collections.

Various factors contribute to the generally poor state of the library materials. The quality of paper and book production since the middle of the nineteenth century, with the majority of books being printed on acidic paper, is the major element affecting the deterioration of the materials. Unlike the papers of the eighteenth century and earlier, most of which have a life expectancy of at least 300 years, nearly all of the modern books have an estimated useful shelf life of about 30 to 40 years. It is likely that recently acquired materials will deteriorate at an even more rapid rate. In addition, poor environmental and shelving conditions in the Wilbur Cross Library, the water, insect, mold and mildew damage sustained by volumes in storage in the Faculty Alumnae Center and the Warehouse, the use of damaging repair techniques in the past, and the lack of staff responsible for the preservation of materials have hastened the deterioration of the collection. An increase in the amount of materials being circulated and photocopied in the new building will intensify the problem.

1. University of Connecticut Library. STATEMENT OF MISSION AND GENERAL OBJECTIVES

2. Ibid.

Over the last few years some attempts have been made to improve the condition of the library materials. The Library Administration has continued to place a high priority on appropriating funds for binding library materials, Ms. Janice Merrill-Oldham has continually improved in-house repair techniques and recommended the purchase of some needed equipment, a Collection Maintenance Unit has been established with the responsibility for shelving and keeping the collection in order, and the Acquisitions Department has undertaken a formal review of deteriorated materials. Although all of these activities are essential, they do not meet the needs.

The time has come, in fact it is overdue, to establish a formal preservation program at the University of Connecticut Library. If this is not done, a large percentage of the collection may have to be withdrawn as it deteriorates. The Library will be unable to fulfill its mission if information of permanent research value cannot be retained. Also the decreasing book budget, the escalating costs of new materials and the virtually prohibitive cost of most out-of-print materials mandates the preservation of what we have.

To dedicate more time, staff and money to improving, maintaining, and protecting the physical condition of the Library's collections; to emphasize the importance of and administrative support for a preservation program; and to centralize responsibility for the development of the program, I recommend that a Preservation Office be immediately established in the University of Connecticut Library. The Office shall be managed by a Preservation Officer and shall be responsible for planning, coordination and implementation of a preservation program for all library materials no matter what format or where they are located. An outline of the major responsibilities of the Office is attached.

Since the preservation program and its staff will directly affect and interact with all library departments, and to allow it independence in attending to the needs of all parts of the collection, I recommend that the Preservation Office be an independent unit, not a subdivision of an existing library department. Because of the many technical procedures involved in the implementation of such a program, and the need for close consultation with the Acquisitions and Processing Departments and various staff involved with bibliographic control, the Preservation Office should be considered a new aspect of technical services and should be directly responsible to the Assistant University Librarian for Technical Services. Because of the nature of the operation and the physical facilities available at this time, the Preservation Office should be located in the section of Room B-107 presently designated for in-house mending and repair.

The Preservation Officer shall have the authority to make recommendations, establish policy and procedures, and set priorities for the preservation of all library materials within the existing decision-making framework of the Library. For the Preservation Officer to be effective, this authority must be clear to all library staff.

As is evident by the outline of responsibilities, the Preservation Officer will be responsible for a wide range of activities. For the first 6 months, time will have to be devoted to organizing, planning, and identifying priorities. A schedule for accomplishing objectives should be established for the long range needs as well as attainable short-range goals. In addition, it is important that a balance be

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maintained between planning and administrative duties and the physical treatment of material. The Preservation Officer should work closely with the Assistant University Librarian for Technical Services, especially during the planning stages and the establishment of priorities.

STAFFING

For the first few years the Preservation Office should be staffed with 1 professional position (Preservation Officer), 1 classified position and at least 35 hours per week of student assistants.

Preservation Officer

The position should be at the library assistant or library specialist level.[3] The Officer will be responsible for managing the Office, implementing a preservation program, carrying out the objectives and responsibilities of the Office, performing complex treatment procedures, supervising and training of staff where appropriate, and in general, serving as the Library's authority on preservation techniques. The Officer should have a sound knowledge of the field of preservation techniques, training and skill in repair and book and paper restoration, demonstrated supervisory and administrative skills, and a knowledge and appreciation for the function and purpose of libraries and the special nature of library materials.

Classified Position

This person will be responsible for performing routine preservation treatments under the direction and supervision of the Preservation Officer.

Student Assistants

Students will be needed to provide additional assistance in performing routine preservation treatments. Because of the present staffing situation, students will most likely have to perform most of the routine work until a classified position can be filled.

BUDGET

Any operation of this kind must have some funds available, especially for the purchase of supplies and equipment. If a preservation program is to be taken seriously, it is imperative that funds be allocated for its support. Costs are difficult to determine at this stage but, considering the present status of the budgets and the fact that we have recently purchased some new equipment for book mending and preservation, the amount of funds needed for the first year should be fairly modest. $2,000 - $3,000 should be sufficient.

Mary Balmer

Mary Balmer
Assistant University Librarian
for Technical Services
February 1, 1980

3. Depending on the emphasis of the program, the state of art, and the availability of qualified personnel, consideration may need to be given to changing the level to a librarian position in the future.

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UNIVERSITY OF CONNECTICUT LIBRARY

PRESERVATION OFFICE

RESPONSIBILITIES

1. Establish and implement a comprehensive preservation program for all library materials and coordinate all activities throughout the Library relating to the conservation and preservation (e.g. physical protection, repair, restoration and preventive maintenance) of library materials.

2. In cooperation with appropriate library departments, formulate policies and procedures for the proper care of the Library's collections, both newly received and existing materials, to bring practices into conformity with accepted conservation principles. Review and examine existing policies and procedures, make recommendations, and develop written manuals and guidelines for the handling and care of library materials including shelving, storage, processing, binding and repair.

3. On a regular basis examine and monitor the Library's environmental conditions including the temperature, humidity, lighting, housekeeping and pest control. Make recommendations for the improvement of conditions where necessary.

4. Develop and implement in-house preservation treatments on a short and long-term basis, including repairs, cleaning, encapsulation of items on flat paper and construction of protective containers and binders.

5. Develop and implement policies and procedures for the handling of materials of permanent research value which are in unusable condition. Determine the best method of preserving them (i.e., binding, photocopying, filming, or restoration).

6. Develop a testing and quality control program and establish performance specifications for all materials and supplies used on or in conjunction with library materials. Make recommendation for the purchase of the best supplies for the long term preservation of the collection.

7. In cooperation with the appropriate departments, educate and train library staff and patrons in the proper care and handling of library materials.

8. Serve as a clearing house for information on conservation and preservation of library materials. Collect and maintain a file of references including articles, pamphlets, catalogs and manufacturer's samples.

9. Prepare and coordinate budget estimates and requests for the preservation of the collection. Also identify and explore alternative sources of funding to strengthen and expand the preservation program or implement special projects.

10. Prepare plans and procedures for the handling and protection of materials during emergencies and disasters such as fire, flood or other water damage, mechanical equipment failure, etc.

PROCESSING/BINDING/PRESERVATION DEPARTMENT
PLANNING AND OPERATING STATEMENT

MISSION

To contribute significantly to the achievement of the Libraries' overall Mission through the preparation, preservation and restoration of Library materials for use by the University Community.

OBJECTIVES

A. Develop and maintain a capability for one-day end-processing and/or routing of all incoming materials, with an economy of labor expended, and while maintaining an error rate of not more than .1%.
   1. Review all practices and procedures yearly, making adjustments and changes as necessary to ensure optimum efficiency.
   2. Develop and implement a Quality Control system designed to keep the error rate at .1% or less, with a high level of confidence.

B. Continual development of increased Departmental capabilities for "in-house preservation and restoration of Library materials in all Collections, including appropriate activity in:
   - Preventive Preservation
   - Selective physical preservation, (repair, binding, restoration)
   - Environmantal control
   - Selective preservation microfilming and/or purchase
   1. Develop, schedule and implement a bookbinding-preservation training program "in-house".
   2. Provide for and schedule advanced training in bookbinding and preservation with outside agencies.
   3. Investigate latest research on all preservation techniques, on a regular basis, and draw up guidelines for their use "in-house".
   4. Consult with Acquisitions and draw up guidelines which will allow the Department more latitude in making judgements about retrospective binding and mending.
   5. Investigate preservation microfilming; make appropriate recommendations on its use at the University Libraries.
   6. Continue to build up the Department's bookbinding-preservation reference collection.
   7. Regularly review and revise the binding policies and priorities.
   8. Conduct retrospective commercial binding according to established schedules and priorities.
   9. Conduct preventive preservation in all Collections according to established schedules, policies and priorities.
   10. Conduct restoration in all Collections according to established schedules, policies and priorities.
   11. Survey binding and preservation activities at binders, restorers and at other libraries.
   12. Begin to box and mat Library materials as appropriate and necessary.
   13. Develop a "Fire & Water Disaster Plan".
   14. Update and resubmit recommendations for optimizing the Library's preservation environment.
   15. Review the work of all binders and restorers yearly.
   16. Investigate and make recommendations on the use of binders and restorers other than those we are now using.
   17. Seek more Grant funding.

C. Make organizational and procedural adjustments as necessary to ensure continued staff development and the continued efficient functioning of the Department.
   1. Review and revise Departmental training and orientation procedures yearly.
   2. Review and revise Departmental organization and job descriptions yearly.
   3. Review and revise Departmental objectives, plans, priorities and policies yearly.
   4. Study the utilization of all staff, making adjustments as necessary.
   5. Conduct formal Supervisory Training as necessary.
   6. Study the use of space in the Department and make necessary changes.
   7. Review and revise all procedures as necessary.
   8. Conduct a yearly inventory and update control records.
   9. Review and revise Departmental Manual as necessary.
   10. Set up a Departmental equipment purchase schedule.
   11. Investigate the lowering of Thesis binding costs to the students.

D. Provide consultation, education and information on preservation and bookbinding and other Departmental work to the University Community.
   1. Conduct formal training sessions, workshops and lectures as possible.
   2. Provide formal and informal consultation service as possible.

E. Encourage and participate in cooperative binding and preservation activities.
   1. Encourage and participate in Boston Library Consortium preservation activities.
   2. Work actively through and with the Boston University Libraries Binding and Preservation Committee.

CONSTRAINTS

- Resources: money, materials, equipment limitations
- Staffing: personnel available, level of experience and expertise available
- Counterinfluence: administrative-bureaucratic, interdepartmental, individuals
- Time
- Space
- Technological limitations
- Availability of local service and/or advice from experts

David P. Goding

David P. Goding
Head: Processing
Binding
Preservation
Department

July 1, 1976

C50

Brown University Memorandum

Date Brown University
April 7, 1980

To: Janet Hampton

From: Fred C. Lynden FCL

Subj.: Collection Maintenance - an Interim Policy

From time to time, questions occur relating to replacement of titles in the Brown collection which are so brittle they can no longer be bound. There has been no policy established because the situation has not been adequately discussed. Any final policy in this area will require contributions from several departments, including Reference, Circulation, Cataloging and Special Collections. However, it seems to me that we should begin to experiment with different approaches so that when a policy group is formed we will have some experience which can guide us in formulating policy. Therefore, I have drafted an interim policy.

The interim policy is drafted in full recognition that this problem has been given thorough study by the Acquisition Department and there are procedures developed for processing brittle materials. The interim policy cannot answer the questions raised in Bonnie Buzzell's April 12, 1979 memorandum. These issues require consultation among the other departments. However, in the meantime, it is important to maintain or replace materials which are receiving continuing requests, but are not usable.

In the long run, it is essential that a library-wide task force be appointed to deal with the issues discussed in Bonnie's memorandum. To repeat her list of issues:

a) Lost books
b) Damaged, mutilated, and unbindable books
c) The transfer of "special" materials from the open stacks to protected locations
d) BUL participation in a national preservation program, or other cooperation
e) The possibility of establishing a preservation section in the library system
f) Preventive preservation
g) Housing, housekeeping, security and disaster planning
h) Possible methods of funding
i) Policies and/or guidelines detailing the theoretical bases for preserving the intellectual and physical collection
j) Location of responsibility for collection preservation in the organization of the library

Some of the above issues are under consideration (parts a and b). Some have had work done on them (g). Others, such as d, are in the formative stages. I have simply drafted an interim policy which can serve until a more thorough exploration of the problem occurs.

c.c. C. James Schmidt
Assistant University Librarians
Madeleine Gross
Department Heads

INTERIM COLLECTION MAINTENANCE POLICY

It is the policy of Brown University Library to replace books which should not be circulated because they are in danger of disintegrating with one more use.

1) Brown University Library should not circulate a book which is held on level C because it is unbindable. The patron should be referred to ILL while the item is being replaced.

2) The procedures developed by the Task Force on unavailable materials should apply to unbindable books. The Acquisition Department will check for other copies or editions. If there are no other copies or editions or if the other copies or editions should not circulate (i.e., they will fall apart if used), then the acquisitions staff should proceed to locate a substitute.

3) If an in-print substitute is found, non-subject funds should be used for replacement, and the older copy should be withdrawn.

4) The Acquisition Department will first attempt to discover in-print sources to replace the title. The Acquisition Department can use the variation of the Lost Book Procedures developed by the Task Force in combination with Yale's Guidelines for checking in-print sources. If possible, we should replace only on acid free paper.

5) If there is no in-print copy, then a decision should be made as to the replacement medium. This decision should be made by Acquisition Department staff. The current choices are:

   a) Xerox copy on permalife paper, and bind.
   b) Send to Brown's Photolab in Graphic Services for microfilming. (This is preferred for low circulation materials.)

6) If the book is microfilmed, a positive print should be made and only this copy circulated. The negative master should not be circulated.

7) All titles replaced on microfilm should be reported to the National Register of Microform Masters.

8) When a substitute copy has been found and cataloged, the patron should be notified. The older, brittle copy should be withdrawn.

9) After six months of using this procedure, a report should be made by the Acquisition Department on the number of titles involved and the cost in staff and materials to replace deteriorating books.

10) Microfilm of materials filmed for patron use should get priority cataloging.

These policies are interim only, and will be superceded when the entire Collection Maintenance situation has been surveyed.

FCL 4/7/80

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Brown University Memorandum

Date April 12, 1979 JCH

To Janet Hampton and Fred Lynden

From Bonnie Buzzell

The purpose of this memo is to report on our efforts over the past seven months to handle the growing number of books in the general collection of the Rockefeller Library that are in very poor condition. We developed in an "ad hoc" manner a method of handling this fragile material as a response to the Bindery's acute space problem: a backlog of approximately 1200 volumes that could not be commercially repaired had developed over a period of time, and the Bindery did not have sufficent staff to do the handwork necessary to return this material to the stacks; the situation became so bad that approximately 900 of these volumes had to be moved to level C (in the "Extra Room") for storage. Because of my responsibility in the area of "preservation" I was called on to develop a system to evaluate this type of material, so that for each volume an appropriate decision could be made: withdraw, replace, or keep despite its poor condition.

Rather than addressing the problem of the backlog, we decided to try to deal with books in poor condition as they appeared in the Circulation Department. Through "trial and error" the following procedure developed: Madeline Gross would bring trucks of bindery books to me in Acquisitions. I would then call Sam Streit to check the truck for any items that should be transferred to Special Collections; he would remove these items to the John Hay Library, and have the circulation charge changed to departmental loan. I would then ask Judith Delmonico to examine the material on the truck in order to identify those volumes that could not be commercially repaired or rebound; this group of material would remain in Acquisitions for us to work on, while the remainder proceeded to the Bindery to be sent out for commercial rebinding.

In Acquisitions I called on various people, but especially Gerri Simon, to assist in gathering information about each volume so that an informed decision could be made as to its disposition. A work slip was inserted into each item, and on it was recorded the result of a search in the main card catalog (bibliographic identification, holdings of multi-volume series and sets, and notes regarding other copies or editions that the library might own), and a search of bibliographies (Books in Print, foreign equivalents of Books in Print, Guide to Reprints, Books on Demand, and, in some cases, Guide to Microforms in Print or publishers catalogs); although this is a tedious and often frustrating search, I felt that it was indispensible before a reasonable decision could be made. The volumes with the workslips were returned to me following the search; I would check the search information, examine the book, and, not infrequently, would check the stacks for the condition of other volumes, copies or editions; in addition, I often consulted subject selectors and other librarians before making a final decision on the disposition of each volume.

Tables A through E, at the end of this memo, summarize the data I have compiled from the work slips of the nearly 300 titles we completed in the period from late September, 1978, through the end of March, 1979. Table A shows the number of titles and volumes involved and their relative subject distribution. Although we received 376 titles in 423 volumes to work on during this period, we were able to complete the search/decision procedure on only 294 titles in 341 volumes. The fields of Language & Literature and History are clearly predominant, accounting for 34 percent and 29 percent respectively of the titles processed. The Social Sciences accounted for only 11 percent of those processed. The low number for Science and Technology (4 percent) would be expected, since

only material circulating from the Rockefeller Library was included.

The system of search/decision described previously was not limted to "unbindable" books. In addition, imperfect, accidentally damaged and mutilated books were fed into the system as they came to our attention. As shown in Table B, these three problems accounted for only 35 (12 percent) of the titles processed, of which 28 were deliberately mutilated or gutted. 88 percent of the titles processed were considered "unbindable"; this condition may have resulted from heavy use, or from the inherent weakness and brittleness of the paper; in many cases it is a combination of the two.

Not surprisingly, an analysis of the dates of the books involved (Table C) reveals that 90 percent of the works are more than 30 years old; 20 percent are pre-1875, 51 percent are pre-1900, and 76 percent are pre-1925. The peak period (56 percent) falls in the fifty year span from 1875 to 1924.

Many factors were weighed in the decision regarding the disposition of each title; most of these are subjective, and only two can be readily quantified from the data we collected: the availability of a replacement, and the existence of other copies or edition of a title in the Brown University Library; these factors are shown in Table D. Although it varies somewhat from subject to subject, for less than half of the titles processed is an edition of the work commercially available. Even this figure gives an overly optimistic impression: in many cases the item that is available varies so much from the book in hand that it would not really be a suitable replacement; in addition, in some cases (especially for series and sets) the cost of a replacement is extremely and prohibitively high.

The presence of other copies or editions of a work in the library system diminishes somewhat the importance of the book in hand; but in more than half of the cases, the library has no other copy or edition of the work. In the field of Language and Literature, the percentage is the highest: the library has other copies or editions of 68 percent of the works involved. However, it is in this field,where the text and editorial commentary may vary from edition to edition, that multiple editions are of considerable importance.

Table E summarizes the disposition of the titles processed. Only 17 percent of the works were withdrawn from the collection. We are attempting to obtain new copies or editions for only 20 percent (column 3 plus column 5). The majority (66 percent) of the works were felt to be important enough to be kept by the Library despite their poor condition (columns 5 plus 6 plus 7).

Discussion. As mentioned earlier, this procedure developed spontaneously in response to a specific problem. The time has now come for it to be evaluated before it becomes further institutionalized. There have been a number of problems that have surfaced as we have conducted this experiment.

1. Staffing. This has developed into an extremely time-consuming operation, and we do not really have sufficent staff in Acquisitions (or any other department I assume) to devote to it the kind of attention I feel that it deserves. We have been unable to keep up with the flow of incoming books, and are certainly in no position to tackle the 1200 volume backlog.

2. Lack of commitment to preservation, and lack of policies to support it. Although there is a growing concern among the staff regarding the condition of the general collections, there has been no top level guidance regarding

the extent and nature of the library's commitment to preserving our holdings for future researchers. My personal opinion is that much of the strength of the Brown University Library lies in its retrospective collection, and that this older material will continue to be of importance, especially in the humanities. The Collection Development Policy may not provide adequate guidance in the area of preservation, as it reflects the perceptions of a particular moment, is not geared to identify collection strengths that may have been overlooked, and probably cannot be expected to predict future interests. In addition, as far as I know there has been no decision as to what, if any, role Brown would expect to play in a national preservation program.

3. Funding. We have been using fund 4105 (Lost Books) for the replacements that have been ordered, but this may not be appropriate once a lost book system gets underway again. In addition, there seems to be no possibility of hiring additional staff to work with this material in Acquisitions (level 1 or the Bindery). Nor are the funds to buy better quality materials or equipment for the Bindery.

4. Lack of microform policies. Consideration should be given to the use of microform copies in a preservation program. There needs to be some guidance as to when microforms should be used to supplement or replace deteriorating material. In addition, if we do have a microform copy made of a work, should it be reported to the National Register of Microform Masters and held as master negative?

5. "Psychological" difficulties. In many cases it is difficult to make any decision regarding a particular volume in poor condition. There is a reluctance to withdraw anything that is currently in the collection, there is a reluctance to spend funds "needed for other things" to replace material, and there is a reluctance to believe that "unbindable" items do in fact have a short life expectancy. I share these feelings with the various selectors that I have consulted, and each of us has our own particular interpretations, thus prohibiting a consistent and uniform approach to the disposition of the material in question.

6. Serials, sets, and government documents share the same problems as single volume monographs, but in some senses their problems are magnified by their sheer bulk. Although usually only one or two volumes of a multivolume work appear on a given bindery truck, it is usually safe to assume that other volumes of the work are in a similar, poor condition. I have kept a record of most of the sets and series we have worked on in the form of a card file, so that other volumes that may appear will be treated in the same manner as originally decided; there are currently about 40 cards in this file. It includes such primary source material as the Congressional Record, the publications of the British Public Record Office, and the Providence City Directory. There are also such indispensible research works as Sabin's Bibliotheca Americana, the Papers of the American Historical Association, Time Magazine, etc.

7. The Bindery does not have sufficent staff to keep up with the work necessary to protect fragile books. Although this work can be done by a trained student assistant, there are apprently no student assistants to spare for this work. It takes at least 10 minutes to make a jacket, and 15 minutes to make a portfolio.

8. There is some question as to whether or not fragile books should be shelved

on the open stacks, and whether or not they should be allowed to circulate outside of the building. (See my memo of 3/30/79 to JCH.) It is worth noting that many of the gutted books that come to our attention are ones in which the body of the work has been removed from the bindery-produced jacket or portfolio.

Despite the problems outlined above, I feel that the program has been a good one, that the principles upon which it has been based are sound, and that the procedure that developed is a very workable one. Therefore, it is with extreme regret that I feel I must recommend that we discontinue it. Although this is an area that is of the greatest personal interest to me, I believe that the diversity and number of my other duties preclude the possibility of devoting the time required to an activity that has so many unresolved problems involved. Obviously, the problem will not disappear, so I therefore make the following suggestions.

1. Until a permanent, on-going system can be maintained, I recommend that a larger portion of the Extra Room be set aside to store "unbindable" books, and that a simple method be developed by the Bindery and Circulation so that this material may be easily located and retrieved. Acquisitions should continue to work with damaged and mutilated books as outlined in this memo.

2. I recommend that a person or committee be appointed to study the many problems involved in preserving our research collections. If it is true that the three primary responsibilities of a library are to select and acquire material, to provide access to it, and to preserve it for future use, it is clear to me that we at Brown have not devoted a suffient proportion of our resources to the last mentioned. Some of the problems that should be addressed in the near future include the following:

   a. Lost books
   b. Damaged, mutilated and unbindable books
   c. The transfer of "special" material from the open stacks to protected locations.
   d. BUL participation in a national preservation program, or other cooperation.
   e. The possibility of establishing a preservation section in the library system.
   f. Preventive preservation
   g. Housing, housekeeping, security and disaster planning
   h. Possible methods of funding
   i. Policies and/or guidelines detailing the theoretical bases for preserving the intellectual and physical collection
   j. Location of responsibility for collection preservation in the organization of the library

cc:Judith Delmonico

THE CONSERVATION AND PRESERVATION PROGRAM FOR THE UNIVERSITY LIBRARIES AT STANFORD

When the sons and daughters of present Stanford students eventually come to this University, approximately four out of every ten library volumes that they take off library shelves will fall apart or literally disintegrate in their hands. Much of the book paper in use since 1860 is unstable and becomes progressively brittle. The effect of environment and use will take a similar toll on microforms, maps, phonodiscs, manuscripts, and other library materials.

The investment in library materials of approximately $117 million which the University will make from 1975 to 1995 will have to be "replaced" at a higher cost because the conditions under which they are received, stored, used, and maintained are not conducive to their long term survival. For books, a rough calculation of the costs related to this deterioration and replacement process is as follows:

The Stanford collections have doubled in size approximately every sixteen years. Assume a doubling of the 1976 holdings figure by 1995 - allowing for a slight leveling. By that year, Stanford might have 8,352,000 volumes. In 1975, Columbia University estimated that the total cost to take action on 1,500,000 of their volumes considered to be in "an advanced state of deterioration" would have been $34,213,900, or a unit cost of $22.80 per volume (see appended table for distribution of these costs, and the specific actions to be taken). Stanford's situation is somewhat comparable. By 1995, based on the Columbia actions, Stanford would have an $82,500,000 problem in today's dollars.

The following known situations confirm that this is a realistic assessment of present conditions:

1. The Barrow Laboratory study (1959) of a sampling of non-fiction books printed and published in the United States during the period 1900-1939 indicated that 39% would not last beyond 1984; approximately 97% had an expected useful life of fifty years or less.

2. The Library of Congress chief preservation officer, Frazer Poole, estimates that present day book paper has a 30-35 year average life-expectancy.

3. The Library of Congress has reported that fully one-third of its collections - that is about six million volumes - are so brittle now that they cannot be given to users without significant risk of damage.

4. The New York Public Library has estimated that more than half of the collections of its Research Libraries have reached an advanced stage of embrittlement.

5. Columbia University Libraries has determined that 30% of its five million volumes are in such an advanced state of deterioration as to be unusable if handled more than twice again.

If these facts are applied to library holdings at large, the implications are of a very considerable magnitude. How can we, at Stanford, mitigate the effects of this threat to the basic availability of information to its students and scholars?

While the nature of the problem has been known for over fifty years, the solution has not been so obvious. The size and nature of this predicament seem overwhelming. A few facts emphasize the difficulty in forming a suitable plan of action:

- The array of problems associated with deteriorating materials are so multi-faceted, that it is difficult to know where to begin.
- Ready economical solutions to curtail the origins of the problem are not available. The problem starts with publishers and binders who use poor quality paper and binding materials. It is compounded by poor library environmental conditions.
- The technology (whether chemical stabilization or restoration techniques) available to aid the preservation process is in a stage of relative infancy and its long term implications are unknown. Despite general agreement and concern about collection deterioration among major research libraries, only a modicum of research is being carried on in these areas at the present time.
- People qualified to cope constructively with the problem are scarce. It will take many years to train a cadre of conservators adequate to the total research library problem of the nation - assuming that funds to do so become available.
- Considerable uncertainty exists about how local, regional and national conservation program efforts will be coordinated.

A. Stanford obligations

What should be the proper goal of a conservation program at Stanford over the next decade? To what extent can Stanford rely on external solutions to the problem? What objectives can be reasonably set for the next five years?

The Stanford Libraries' mission statement includes the following:

> "It is the function of the Libraries to facilitate the research and teaching activities of scholars by making available in a timely manner, the most useful resources ... The Libraries are thus engaged in a constant effort to preserve intact, and in useful condition, what they have acquired and created over decades of growth."

As part of this mission, the Libraries must ensure that materials acquired for use by its community of scholars will be physically sound. Many Stanford library units have preservation programs, however these are relatively

uncoordinated, differ widely in uniformity, are sometimes forgotten, and are not sufficiently attacking the problem. The Libraries must assign responsibility for conservation activities and define standards for the acquiring, processing, storing, maintaining, handling and instructing in the use of the variety of types of materials obtained by the University.

Acquiring of new materials would have implications for book selection policies and the allocation of book funds. It will likely influence the format of materials that are chosen, including alternatives to highly acidic paper in books and journals and pursuing archival quality in other materials.

Processing would include inspecting, fumigating, binding, repairing, rebinding and generally reviewing steps for the handling of newly received materials. The emphasis here would be on making preservation decisions at the time materials are received into the library system.

Storing would involve the decisions for placing materials under the most conservation-effective conditions without unreasonably diminishing their academic utility. Shelf assignment to a non-public preservation stack may be required for the most brittle items. Conscious steps to create a more acceptable climate in which to store a variety of types of materials is an integral part of the storing function.

Maintaining materials includes preventive preservation techniques which include periodic inspection, formulation of "disaster" plans, cleaning, general housekeeping, and the selective application of steps included under the general rubric of preservation (e.g. deacidification, reinforcement, plastic wrapping, special binding, matting, encapsulation, and microfilming). Another aspect to be considered is formulation of retention/withdrawal policies under inter-institutional cooperative collection programs.

Handling would involve the appropriate steps in placing materials on shelves, or in microform or manuscript containers, and the proper movement of items by library staff members. The prevention of fore-edge shelving, jamming, overloading, etc. would come under this category. Special equipment used for the movement of books within the library (book drops, trucks, conveyor systems, packaging materials, etc.) must meet carefully determined specifications and should be used in a responsible manner by trained staff.

Instruction in the Use of materials would be aimed at library patrons and staff. Through a carefully defined public relations program the library must market the idea of the fragility of materials used in or borrowed from the library environment. Instruction would include such steps as how to remove a book from a shelf, how to open a book or work with manuscripts or other types of materials, how to thread or display microforms and tapes, how to open for photocopying, avoidance of marking or otherwise abusing materials, the handling and care of materials outside the library housing, and a general indoctrination that library materials must be cared for as one might treat a prized possession.

B. Current circumstances in Stanford Libraries

In each of the above six aspects of a conservation program the Stanford Libraries have done much over many years. Approximately 3% of the operating budget has routinely gone to preservation expenditures - contract binding and preservation microfilming. An undetermined but sizable amount of book

funds have been spent for replacement copies, duplicate copies, and for copies in a preservation format. Staff efforts have been significant and include inspection of new receipts for condition, fumigating of collections as needed, devoting a section of the Binding and Finishing Division to repairing materials, attempting to achieve suitable atmospheric conditions for housing and displaying materials, developing a program for dusting books and applying of leather preservative, housing selected materials in boxes or enclosed cases, some matting and encapsulation, using supplies which are acid-free, instituting a program for cleaning all motion picture film after use, housing the brittle paper collection in a protected and segregated area for the past twelve years, and promoting a variety of staff and patron educational efforts. Further information on all these current efforts is provided in Appendix II to this document.

C. Guiding Principles for a program redefinition

In achieving the goal and specific objectives of a broadly-based conservation effort, a set of assumptions must undergird the program as guiding principles:

a. Over the long term only a nationally coordinated program can assure the preservation of all material required for future scholarly purposes. The scope of "all material required for future scholarly purposes" is a proportion of current worldwide publications, so the national program need not solve the universe of preservation needs.

b. National and regional conservation programs may carry the responsibility over the next two decades for all or at least the majority of the necessary preservation efforts which require large equipment and costly processes. (The Library of Congress and the California Library Authority for Systems and Services are beginning to develop such programs.)

c. Technology - knowledge of the problems of conservation and the technical means to solve them - and the availability of professionally trained conservators are currently limited and will require years of effort to meet the needs of research libraries and archives.

d. In order to cope effectively with the problems of rapidly deteriorating materials, corrective efforts will probably be conducted simultaneously rather than sequentially at the local, regional and national levels. However, each level of activity must be coordinated with all other levels to arrive at a coherent program.

e. Stanford's local program should be an integrated segment of the national and regional programs when they evolve. There must be a steady long term effort to supplement and not replace other components in the stated goals and objectives of the Stanford library system. The local program may need to cope with 5% of our materials, roughly speaking, leaving the balance to others sharing in the national and regional efforts.

f. Local conservation efforts, while constituting only a modest percentage of a total national program, will still necessitate a considerable infusion of funds in order to deal, in a timely fashion, with materials which are needed by Stanford's scholars.

g. The ability to cope with the problems of conservation will require an intensive program of education within the University, the fruits of which are not likely to be felt for some years.

D. Objectives for Stanford action

Realistic objectives for the immediate and short term would be to:

1. Assign Responsibility. Over the last dozen years preservation efforts within the University Libraries have been scattered among a variety of staff members, with the Chief of the Acquisition Department having a lead assignment. Since there is general recognition that a problem exists and that steps must be taken to deal with the problem, one senior full-time individual must be designated as being responsible for planning and managing a cohesive, effective preservation program. Further, an appropriate amount of time, staff and budgeting support is required to meet the objectives here outlined. All planning should be coordinated through, if not done by, one person. Within the organizational structure, the individual designated as the Officer for Conservation-Preservation Affairs (Conservation Officer) should report directly to the Assistant Director for Technical Services because of the far-ranging program needs and technical requirements. The number and type of staff support provided for this Officer will be predicated on the program elements.

2. Assess the nature and magnitude of the problem. The Library staff read the technical reports, listen to colleagues at other institutions, see some of the Stanford materials deteriorating, and know that the climate and conditions in most of Stanford's major facilities are not conducive to conserving the heritage of graphic materials. They know the problem at Stanford is large. There are pieces of information in the possession of a variety of staff members. No attempt has been made to date, however, to assemble comprehensive data as a basis for planning corrective actions.

   To assemble this data, the Officer needs to improve the collective understanding of relative condition and estimate quantity and quality of action needed. The study should cover the physical environment in which materials are stored and handled, review existing procedures for maintenance and repair including an evaluation of the quality of this work, determine what educational and instructional programs currently exist, and ascertain the staff knowledge and attitudes toward material conservation.

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3. Formulate the Program. When some understanding of the magnitude of the problem has been achieved, and when the goals and specific objectives outlined in this document have general consensus within the library organization and on the part of faculty and University officers, a program must be formulated that can be usefully implemented and is feasible. Because of the multitude of factors included under the conservation program and the diversity of materials to be preserved, some logical order must be given to the facts and priority of actions assigned.

   The program should describe how and when certain actions are to be taken. It might outline at what state of deterioration materials are to be discarded as well as note when they are to be protectively wrapped, replaced, restored, rebound, repaired, Xeroxed on acid-free paper, or microfilmed.

4. Establish Priorities Among and Within the Program Components.

   Even a modest attempt at defining the program components is likely to produce a very considerable array and length of tasks. These tasks must, however, be placed in order and the cost in terms of staffing, space and time requirements must be clarified. These factors, as well as a definition of activities to be pursued at a regional or national level, will affect the plan of action at Stanford.

E. PROFILE OF CONSERVATION OFFICER IN THE STANFORD UNIVERSITY LIBRARIES

The individual assigned responsibility for conservation efforts at Stanford should be a professional organizer, manager, writer and proselytizer. The person should have a knowledge of conservation problems in libraries, some scientific background, experience with library principles and practices, technical knowledge including the ability to monitor environmental conditions, and a willingness to accept the challenge of a large and complex issue.

The major responsibility of this person is to shape and form the program. Staff support, including technical specialists (such as a trained conservator) will be added as the requirements of the program are defined and the funding levels are established.

Library-wide responsibility will be a key factor in the successful accomplishment of the plan. This entails that the Conservation Officer have authority within the University Libraries and an advisory function, as requested, within the Coordinate libraries. It requires involvement in such planning groups as the Technical Services Advisory Council, Public Services Council, Collection Development Council, Administrative Forum, and from time to time in the Technical Services Coordinating Committee and the University Library Council.

A standing Conservation-Preservation Committee may be required to work on such aspects as program coordination, staff education, publicity, priority determination and other policy or decision matters. The Conservation Coordinator would chair such a committee composed of those occupying the positions of, for example, the Building Projects Manager, University Archivist, Rare Books Librarian, Head of the Binding and Finishing Division, and one or more other representatives of Public Service units.

F. ACTION COMPONENTS AND TIMING:

Fall 1977	-	Review "Conservation Planning Document" with Department Chiefs and consultants, University Library Council, and Academic Council Committee on Libraries.
December 1977	-	Finalize planning document; establish funding sources for initial stage (1-3 years) utilizing $30,000 of existing budget binding assignment and $5,000 for preservation microfilming.
January 1978	-	Prepare a job description for the conservation officer and post the vacancy. This would be a professional level manager position reporting to the Assistant Director of the University Libraries for Technical Services.
January-May 1978	-	From planning document anticipate steps that could (should) be taken prior to the arrival of the Conservation Officer (environmental design for renovation of Green Library west wing, completion of the sample testing with the University of California, planning preservation support for the California Library Authority for Systems and Services).
May 1978	-	Hoover Institution to issue procedures for use of its Fumigation Facility.
	-	Establish office space for the Conservation Officer, perhaps Room 401 of Green Library, west wing.
May/June 1978	-	Appointment of Conservation Officer.
June-November 1978	-	Conservation Officer undertakes study of the problem and prepares preliminary report.
November/ December 1978	-	Decisions made on initial priority tasks to be undertaken.
	-	Funding component included in 1979-80 Budget Letter.
Winter 1979	-	Fund Raising proposals for 1979-80 support.
	-	Possible reorganization of library functions are considered in light of task decisions.
	-	Additional funding sources are determined so that support staff (students) may be hired immediately to carry out assignments.
	-	Travel and training schedules are outlined for officer and staff for next six to twelve months.

Spring 1979	-	Commence an instructional program for library staff and patrons.
1979	-	Conservation Officer presents plan for conservation approaches as part of move into new Green Library east wing.
	-	Permanent quarters are established for the Conservation staff including consideration of a modest laboratory.
	-	Fall budget letter will include additional funding request for conservation program.
January 1980	-	Accomplishments of Conservation Program are reviewed and new or revised program elements are given priority sequencing.
1980	-	Program steps are carried out with greater intensity which may include expanded laboratory facilities, heavier involvement in planning regional facility, formalization of collection development implications.
	-	Larger, more active involvement in national conservation efforts.
1981	-	Establishment of more permanent funding sources due to intensive development efforts.
	-	A detailed five-year conservation program is prepared based on experience of the previous two years.
1982	-	California Cooperative Conservation Program is formed and funded, involving a treatment facility and establishment of a master microfilm negative vault.

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CONSERVATION POLICY STATEMENT

MORRIS LIBRARY

SOUTHERN ILLINOIS UNIVERSITY

March 1980

The Conservation Policy Statement outlines major concepts, principles, and responsibilities for the preservation, conservation, and physical treatment of the collections. It is an in-house document and subject to continual revision. The Appendices are intended as supplementary information.

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1. Philosophy for Preservation/Conservation/Restoration

Policies for the conservation of library materials affect every department in the Library. Further, the way in which library materials are treated throughout the library will affect their longevity of use. Conservation entails balancing the protection an item receives with the use it receives.

1.1 Definition of Terms

The Library strives to provide a comprehensive conservation program for its collections consistent with its needs, goals, and objectives. The program encompasses plans, policies, procedures, job allocations, and resources required to implement, where appropriate, the preservation, conservation, and restoration of those library materials maintained for the use of the educational and research community the library serves.

"Preservation", for the Library's purposes, is the action taken to retard, stop, or prevent deterioration; "conservation" means maintaining, in usable condition, each item in the collection; and "restoration" implies returning the deteriorated item to its original, or near original, condition. "Information preservation", as opposed to preservation of the physical object, consists of reformatting (microfilming) materials in order to preserve their intellectual content.

An active conservation program encourages respect for the library and its collections, reduces the loss of materials through neglect or carelessness, and conserves resources through the application of preventative and restorative measures. Conservation is a logical addition to the process of selecting, acquiring, cataloging, and disseminating library materials.

The conservation policy statement formulates specific guidelines and outlines the distribution of responsibilities in order to facilitate the conservation of the collections in view of the Library's organization and policies and existing conservation knowledge and techniques.

1.2 Principles of Conservation

The conservation program is based on several broad principles:

--that conservation is essential in a research library.

--that conservation is expensive.

--that each item/category of materials to be treated is examined carefully with regard to ethical (the ethics of conservation treatment), aesthetic, and economic considerations and the most appropriate treatment chosen.

--that decisions to treat individual items or whole collections are made jointly by the Conservation Librarian and the divisional librarian responsible for the material. Selection of the most suitable treatment is a decision initiated by the divisional librarian (who is in the best position to know the item's value and intended use) on the advice of the Conservation Librarian who is responsible for choosing the best combination of methods and materials.

--that a distinction is made between ephemeral items, rare or unique materials, and materials of permanent research value, and that this distinction forms the basis for decisions concerning retention of the original format versus preservation of the intellectual content.

--that all materials used for the treatment of library materials are permanent and non-destructive.

--that nothing is done to a rare or unique item that can not be undone, i.e. the treatment reversed.

--that the Library can not justify retention of unusable library materials.

1.3 Priorities of the Conservation Program

Priority listing within the conservation program is based on those activities designed to have the most significant and immediate impact on the condition of the collection in balance with those activities designed to provide the Library with a logical, unified, and well-organized long-range operating program.

1. Control of the environment including filtration of air, air-conditioning, humidity control, and protection against the effects of ultraviolet light. (see Appendix 1)
2. Collections maintenance including circulation and book return policies, handling and use practices, shelving, cleaning in the stacks, routine repairs, and leather treatment.
3. Segregation of those items in an unstable condition while they await a decision.

4. Binding and conservation treatment including commercial binding, temporary binding of current serials (togic), book repair, rebinding in-house, and protective encasement.
5. Information preservation. (see Appendix 2)
6. Mass deacidification. (see Appendix 3)

1.4 Categories of Materials

The purpose of the following categories of materials is to aid the librarian and conservator in making decisions, setting priorities, and developing procedures.

--Research Materials (materials of permanent research value).

--Divisional Collections (materials that circulate, receive moderate use within the building, and contain some duplicates).

--Reference Materials (materials that are used frequently and are usually bound inadequately for their size and weight. Sometimes superseded).

--Ephemeral Materials (materials that will be thrown out, superseded, or reformatted--a. those that receive heavy use and b. those that receive light use).

--Special Collections (rare books, unique items, items of local significance, or special format or subject collections.)

--Items or collections that are especially vulnerable because of their format or subject matter.

--Undergraduate Library Collection (materials very heavily used within the building and frequently circulated. In most cases, but not always, duplicated in the Divisions).

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HISTORICAL PERSPECTIVES

National Library of Canada

Some Notes on Conservation in Canada.

Joyce M. Banks, Rare Books and Conservation Librarian,
June 1979.

Introduction.

There are two kinds of conservation: preventive and curative. Preventive conservation, which retards deterioration, is the responsibility of the curator. It involves safe housing and handling of materials and includes the following: the provision of optimum environmental conditions; the provision of adequate stack space and suitable storage containers for fragile materials; training programs for staff to ensure that materials are handled in ways which will minimize mechanical wear and tear; establishment and enforcement of use regulations to prevent damage to holdings during consultation and exhibitions; raising conservation awareness among colleagues, staff and the general public; organizing and co-operating in preservation microfilming projects; supporting and encouraging conservation research; participating in disaster planning. Curative conservation is the task of the practical conservator in consultation with the curator. It involves a wide range of time-consuming and often expensive techniques, which can be carried out only by qualified conservators in well-equipped shops. The curator selects materials to be restored and repaired, and he must have a good knowledge of conservation methods, since he is responsible for the maintenance of the bibliographic integrity of the materials in the collection.

The conservation situation in Canada is critical. There are more than two million items in special collections alone which require special housing and handling and expert restoration and repair if they are to survive. While many librarians and archivists are informed and conscientious about the needs of their collections, and while many collections are well-housed and carefully handled, neither curators nor collections are usually supported by adequate conservation budgets. An enormous conservation task must be undertaken, but there are few qualified conservators in this country, and no places where more can be trained in book and paper conservation. Canadian curators are coping with these problems in a number of ways.

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Conservation Awareness.

The level of conservation awareness has been demonstrated frequently. Early in November 1977, the National Library of Canada sent a conservation questionnaire to special collections librarians all over Canada in an effort to determine the levels of interest and activity in conservation in this country. 109 special collection librarians, representing 88 institutions were canvassed. 79, representing 60 institutions, replied. The results were published in May 1978 in National Library of Canada. Survey of the conservation of special collections in Canadian libraries, 1977. Analysis.

In autumn 1978, a group of librarians in the Atlantic Provinces Library Association organized the Committee on Conservation of Library Materials. Its aims were published in the APLA bulletin. Conference supplement, 42(6), April 1979, p. 7:

> 1) We will put together, or sponsor, educational programs dealing with library conservation; 2) we will attempt to gather information about conservators, resources, local programs, and the need for conservation in all four provinces of the Atlantic area; 3) we will attempt to act as a clearing-house for librarians in the Atlantic provinces who have questions or concerns they wish to share, about library conservation issues.

The Committee has conducted two successful conservation workshops since it was established.

At present the Province of Quebec is most active through publications. The journal of the Association des Archivistes du Québec, Archives, includes a section on conservation in its annual reading list. The Bulletin de la Bibliothèque nationale du Québec frequently features conservation articles by senior conservators. Each year the Graduate School of Library Science, McGill University, invites a private conservator to give a two-hour lecture on and demonstration of the conservation craft, as part of the Rare Books Management course.

A variety of conservation programs and training in the book arts are available in Ontario. The Public Archives of Canada gives two four-week courses in archives management annually: one in English and one in French. One day of each is devoted to conservation. Participants visit paper and picture conservation areas and discuss both theory and techniques. Both the Public Archives and the National Library of Canada provide in-house conservation demonstrations and lectures for staff, including tours of the Records Conservation Unit where the restoration and repair of library and archives materials is done. Both the National Library and the Public Archives provide limited conservation consultant services.

The School of Library and Information Science, University of Western Ontario, offers a fourteen-week conservation course, "Conservation and preservation in archives", which includes some practical experience for students in the School's conservation shop, under the supervision of a qualified conservator. This is the only course with conservation shop experience offerd by a Canadian library school.

In Toronto there is strong interest in conservation and the book arts. The Toronto Area Archivists' Group sponsors an excellent paper conservation workshop. This group, with the Ontario Museum Association, published the Museum and archival supplies handbook in 1978, which should be acquired by all curators interested in conservation. The Toronto Board of Education and the Three Schools both offer courses in hand bookbinding, papermaking and marbling, conducted by qualified conservators, as does La Chasse Gallerie, where the courses are given in French. In 1977 this interest resulted in an exhibition, described in Reader, lover of books, lover of heaven ...; a catalogue based on an exhibition in the book arts in Ontario, compiled by David Kocin of North York Public Library. Significantly most of the items displayed were the work of conservators.

Librarians in Manitoba have shown considerable interest in conservation. An independent survey of conservation practice in major Canadian libraries was conducted by a Winnipeg librarian in 1976. The Glenbow Institute conservation staff conducts workshops for librarians and archivists in Alberta, and a

private conservator in British Columbia has been invited to give demonstrations and tours for students at the School of Library Science, University of British Columbia.

Preservation Microfilming.

There are many examples of good preservation microfilming programs beginning with the Canadian Library Association's Canadian Newspapers on Microfilm Project. The Public Archives of Canada has a preservation microfilming policy under which fragile collections are generally closed when they have been filmed. The National Library has co-operated in a number of preservation microfilming projects, and has always urged private microfilming companies to respect the Library of Congress microfilming standards and those of the National Micrographics Association. The National Library has an on-going Ethnic Newspapers Microfilming Project, and the Canadian Official Publications Section has co-operated with the Library of Parliament and others to have scarce government documents filmed. In 1974 the Peel Bibliography on Microfiche projectwas launched, funded by the Devonian Charitable Foundation with added support from the National Library. In 1978 The Canada Council established the Canadian Institute for Historical Microreproductions/Institute canadien de microreproductions historiques, to preserve retrospective Canadiana on microfiche. Many other valuable programs and projects could be cited.

Funding for Conservation.

The results of the National Library survey of 1977 showed that 61% of those who responded spend less than 1% of the amount of their acquisitions budgets on conservation. Another 35% spend less than 10%. Economy is only part of the reason for poor funding. Lack of conservation awareness on the part of library management, and the fact that there are few conservators to do the work, also account for the failure of most institutions to allot realistic conservation budgets. Moreover, the emphasis in Canada has been on the

preservation of fine arts and museum artifacts, and the general public has not shown interest in the preservation of library and archives holdings.

The In-House Conservation Shop.

There are eighteen in-house shops in Canada. Most are equipped for the full range of techniques required for the restoration and repair of paper, but only nine also do binding conservation. With few exceptions, the shops employ not more than three conservators, and usually less. None can undertake commissions from outside agencies or institutions.

Conservation Outside the Institution.

Some curators send materials outside for conservation treatment. Those who responded to the 1977 questionnaire named 24 shops. But, all named are not equipped to handle all curative techniques. In fact, twelve of them are commercial binderies which offer limited hand bookbinding and binding repairs; none has deacidification equipment. The other twelve shops mentioned offer a high level of curative conservation, but two are now closed. They were the regional shops of the Canadian Conservation Institute at Moncton and Vancouver. The Artistics and Historic Works on Paper Division at CCI headquarters in Ottawa is now the only CCI shop accepting commissions from librarians and archivists across Canada, and this Division has a staff of four binder/conservators. Of the nine remaining conservators named in the survey, one is in Chicago, leaving eight in this country who work regularly for Canadian institutions. Three of them are in British Columbia, and the other five are in Ontario. However, there are now a few more conservators working in Ontario, including some from the graduate course in conservation offered at Queen's University.

Training Conservators.

There is no training offered in Canada for the binder/conservator. A few institutions treat paper conservation as part of training for other kinds of conservation. The School of Graduate Studies and Research, Queen's University, offers a conservation course leading to the degree of Master of Art Conservation, but as the degree implies, the focus of study is on fine art and museum artifact conservation. Algonquin College of Applied Arts and Technology in Ottawa provides some paper conservation training as part of the three-year course for Museum Technicians. A number of in-house conservators in Canada accept students from Queen's and from Algonquin for internships. Aside from our failure to provide training for new binder/conservators, there is no accreditation agency in Canada for qualified conservators. And, those who wish to take refresher courses or to up-grade their skills must go abroad to do so.

Conclusion.

The conservation situation in Canada is critical. There is little money and few conservators to undertake the restoration and repair of our huge national treasure, special collections in libraries and archives. Canadian curators have approached the problem, and they are certainly aware of the consequences of failure to solve it. Sound preventive conservation programs must be established to ensure that collections survive until curative conservation can be applied.

PRESERVATION AND CONSERVATION PROCEDURES AND PHILOSOPHIES DEVELOPED AT THE LIBRARY OF CONGRESS, WASHINGTON, D. C.

Library of Congress preservation procedures and the philosophy behind these procedures have developed out of necessity rather than being the result of pure theory or following past techniques. Over the last 20 years the Library has recognized the dimensions of the preservation problem and has come to the conclusion that past approaches could not be used to make significant progress on the tasks ahead.

Other than binding, mending, and some lamination activities, the Library's first deliberate preservation activity was the conversion of certain files--generally newspapers--to microfilm. Realizing that the poor quality of paper demanded that action be taken to convert the format of some publications to a more permanent medium, the Library decided that 35mm silver halide microfilm would be the standard format for newspapers, serials, monographs, and manuscripts placed on film.

During the 1940s and early 1950s much of the microfilming done at the Library of Congress was done from bound volumes which produced less than satisfactory master negatives and generally resulted in some damage to the materials filmed. Because this microfilming was not done with the view of making preservation negatives, much of it has had to be refilmed. After much soul searching, the Library began to make the distinction between printed materials which have intrinsic value and materials which have only intellectual and informational worth. The decision was made that materials in the latter category would be completely replaced by microfilm and the original material discarded after filming and editing. This decision meant that volumes placed in the program would be disbound before filming so that the microphotographer would be filming from sheets rather than bound volumes which produces an excellent master negative at considerably less cost than would be possible when filming bound volumes. In this program, the casings are removed and the spines cut on all materials being microfilmed. Titles going into the program are carefully screened so that valuable, bibliographically significant, autographed, and other intrinsically important titles are not filmed and discarded. More titles are "saved" with the medium of microfilm every year at the Library of Congress than by any other procedure or technique.

What then to do about the physical preservation of rare and valuable materials? Because so many of the labor-intensive techniques used by previous generations of conservators have presented problems for the present generation, the philosophy of "to do less is better" evolved over the years. Being acutely aware that many past techniques and materials were unsound and potentially damaging, the Library of Congress Restoration Office works closely with the Research & Testing Office to insure that all

materials being considered for use in restoration procedures are evaluated for long-term effect. Being aware of the sins of the past and relying upon sound science has allowed the Library's program to make considerable advances.

Faced with a conservative estimate that 12,000 man-years of work would be required to preserve all of the Library of Congress' rare and intrinsically valuable collections, it was obvious that a different approach to the traditional item by item treatment was needed if LC was ever to succeed in arresting deterioration caused by generations of neglect, abuse, and ignorance. During the early 1970s the concept of "phased preservation" was developed as a response to cope with this massive problem. This approach provides a holding action to stabilize deterioration in an item at its present level until new techniques are developed or until time and funds become available to perform a full conservation treatment. One large project employing this procedure involved the boxing of 8,000 European law volumes. All boxes were custom made to support the individual volumes which were often distorted. Efficiencies were realized by grouping the volumes in standard sizes and by using survey data to group collections into treatment categories.

Probably the one technique developed by the Library of Congress which has been most helpful to the greatest number is that of polyester encapsulation. Developed in part as an alternative to lamination, the technique is most useful in protecting single sheet documents, but, if the value warrants, the procedure can be used to protect entire volumes leaf-by-leaf. The procedure involves enclosing a single leaf between two sheets of polyester film and sealing the top, bottom, and sides with a double-coated tape. The document so enclosed rides freely but is supported by the strength of the film and adheres to the film because of static electricity. A very brittle page can be encapsulated and then the polyester envelope can be wrinkled or creased with no damage occurring to the page. This procedure can be used for the smallest page up to very large posters and maps. To meet other needs several variations on the polyester envelope have been developed. Recently standard size polyester film processing folders have become available from commercial sources--a development encouraged by the Library of Congress Preservation Office.

Because of the success encountered in using these techniques, the Library has generally abandoned lamination, full-page reinforcement, full backing, and earlier techniques employed in the conservation of materials.

Norman J. Shaffer
Chief, Preservation Office
Library of Congress
November 1978

PRESERVATION AT THE YALE UNIVERSITY LIBRARY

History

Preservation has long been a deep-rooted concern of Rutherford Rogers, Librarian of the Yale University Library. He served on the ARL Preservation Committee, 1960-1974, and emphasized the importance of preservation efforts for academic libraries

in his book, University Library Administration. His dedication to preservation work and the realization of the magnitude and seriousness of the problem provided an excellent environment for the growth of a Preservation Program for the Yale University Library's research collection, a collection in which every problem was magnified and made obvious by the quanitity and age of the holdings and exacerbated by the lack of air-conditioning, proper binding techniques, open stacks, and the money to start solving problems on a volume-by-volume basis. The late Harry Harrison, then Head of the Circulation Department, was also a key instigator in the establishment of a Preservation Program; he had first-hand experience with handling the thousands of deteriorated volumes with very few options for solutions other than sending requests for replacements to the bibliographers. The crumbling volumes were returned to the open stacks annotated with a replacenant note and very few were ever replaced in this way. Agnes Bole, then Head of the Binding Department also dealt with deteriorated volumes which staff would hopefully send her for "rebinding." Small red dots were placed on those volumes which were definitely beyond feasible repair or "rebinding" before returning them to the stacks, while others were offered to the Rare Book Collection.

The Library Administration established the Preservation Office in the Fall of 1971 with Susan Swartzburg, a librarian experienced in developing programs in the Interlibrary Loan field, as Head on a part-time basis. The Preservation Office was initially associated with the Circulation Department under Public Services and the Head reported directly to the Head of Circulation. This

arrangement developed because of the interest shown by Mr. Harrison and because of the convenience of association. Since some priority had to be established as to which volumes were "preserved," all deteriorated books sent to the Preservation Office were identified by Circulation staff after they circulated. Thus, the priority of recent use was set and has been followed since.

Mrs. Swartzburg developed the basic search routine on the premise that every individual volume must be reviewed and decided upon based on its unique subject matter, physical attributes and condition, use pattern, and relation to the rest of the Yale collection. Funds were not immediately available to develop many options other than a modest replacement program, a small amount of repair and rebinding as it fit into the existing program with its one hand-binder and his assistant as the only alternative to commercial oversewing or new casing, transfer to other collections, or withdrawal when the item was an exact duplicate, out-of-scope, or deemed expendable by the specialist who reviewed the searched materials. During that first year, the Head of Circulation made most of the decisions on the disposition of each book, always from a fairly conservative standpoint of "keep" rather than "withdraw." The Head of Acquisitions, Stuart Debenham, was also consulted on volumes in his area of expertise. Mrs. Swartzburg's only help was a library school student, Gay Walker, during the Christmas break for six weeks who had also worked in Interlibrary Loans previously and who was directing her reading, coursework, and papers toward preservation while in Library School.[1]

Mrs. Swartzburg left in the Spring of 1972 and Gay Walker took over as

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[1]During this six-week period, Ms. Walker conducted a survey in the Yale stacks to gauge the extent of the deterioration problem by examining a total of 12,000+ volumes in four different Yale classes. This rather narrow survey identified only those volumes which were no longer entities, having loose or crumbling paper or binding problems and not those which highly acidic paper which would break or crumble upon use. These findings indicated that 2.6 % of the collection, or at least 78000volumes, was already too poor to use and in immediate danger of becoming incomplete. Another 8.3 % required immediate binding or repair attention. (250,000 volumes).

Librarian in Charge of Preservation (Librarian I) in July of that summer. The Administration approved a new searching assistant position that Fall which was a high-level clerical/technical position requiring a college degree. With this help, more searching could be done and attention was turned to developing the options necessary for a viable preservation program. Subject specialists in every field, including the five Library bibliographers, the area curators, and the heads of the subject libraries, were drawn into the decision-making process. In 1974, a part-time photocopy assistant was added to the staff to run the rented photocopier in the Preservation Office after discouraging experiences with the Library's Photographic Services. Since then, the photocopying machine has been in use full-time for two years and part-time the rest of the time depending on the build-up of the workload. In 1976, a second full-time searching position was added to the Preservation staff and a part-time clerk-typist was added in 1978. These additions allowed the continual coverage of the Office and a greatly increased searching capacity as well as the processing of an additional workload created by RLG (Research Libraries Group) membership.

In November of 1977, the Preservation Office was merged with the Binding Department upon the retirement of its Head to form the Preservation and Preparations Department within the Technical Services Division. Ms. Walker, as the Head, reports directly to the Head of Technical Services, Åke Koel. Routines in the Preparations Division, the old Binding Department, were carefully reviewed and altered where necessary to provide better protection and handling during the binding and labeling process of each volume.

As the Preservation office grew, so did thenumber of volumes retained there, and it has "lived" in four different locations in the Library since 1971 (Rooms 606, 411/412, 333, and 335/335a), each area larger than the last although this collection is fairly stable now. The bulk of these volumes consist of items awaiting final action where the decision has been made and the

deteriorated volume is waiting, for instance, for the arrival of the commercial reprint replacement.

The Preparations Division

The Preparations Division of the Preservation and Preparations Department consists of two section: Preparations and Plating/Labeling. Preparations staff prepare the more than 23,000 volumes bound annually for commercial binding by sorting the new unbound volumes delivered by the Catalog Department into different binding categories based on width of inner margin, quality of paper, and nature of publication. Volumes receive new casings only and are not over-sewn whenever possible, and serial issues are sewn through the fold in many cases. Records are maintained, volumes are checked for special instructions and packed for shipment. Returned volumes are examined for binding quality and spelling errors. The majority of volumes bound are paperback monographs. The Plating and Labeling section identified all new volumes with appropriate stamps, call number labels and bookplates for the more than 100,000 volumes handled yearly.

The Conservation Studio

In 1973, a Beinecke gift made possible the establishment of the Conservation Studio under the able direction of Jane Greenfield, a binder and conservator who had studied with Laura Young and Paul Banks and had owned and operated her own hand bindery in New Haven for several years. The Studio carries out all forms of restration for Yale's rare materials including deacidification, leaf-casting, repairs, rebinding, mylar encapsulation, and boxing. Another major area of concentration is on the less spectacular bindings of important research materials from all the collections, especially since 1978 when a position was moved from the Binding Department to Conservation during the former's merger with Preservation. The two final positions for binding in the Preparations Division responsible for the pamphlet binding, ten-

porary bindings and some repair were transferred to the Conservation Studio staff in 1979 so that all the physicalin-house repair work is done by this unit. Jane Greenfield has also solved many restoration problems, aided in minor water disasters, and played a key role with her staff in the freezing of the beetle-infested volumes in the Beinecke Rare Book Library.

The Preservation Search

Circulation staff deliver volumes requiring Preservation attention to the Preservation Division about twice a week. Preservation personnel give these volumes a rough screening to remove those printed on good strong paper which merely require a new binding; these are sent directly to the Preparations Division and are generally the more modern titles. If the text-block is still strongly sewn or in one solid piece, the volumes will receive a new casing only, an invaluable option offered by many commercial binders which does not damage the volume. Those volumes with good paper but with a text-block in several pieces will either be hand-sewn or oversewn, although the more expensive hand-sewing is much preferred. Older titles of pre-1850 imprints may receive new commercial casings later but are generally put through the search process in case they are rare and might be offered for transfer to the Beinecke Library or require special binding treatment. All volumes not sent immediately to Preparations for binding are charged out to Preservation so Circulation has a record and readers may use the volumes in the Preservation office. Approximately 500 readers consult volumes in the Preservation office yearly.

Search cards are filled out for each title charged in using 5" x 7" ruled cards. The volume's call number, main entry, title, edition information, and imprint are marked on the card along with any special descriptive or other informational notes. A notation is added if the paper is very good and the item can be repaired; this alerts the searcher to avoid checking trade catalogs for reprint or film availability later. Books charged in are placed on search

shelves with these cards showing. A full shelf, approximately 30 to 50 items, constitutes one bibliographic search and also serves as the basis for the loca n of volumes in the room. Each shelf is dated and contains volumes charged in under the same date. That date is on the charge card as well which is our finding aid. For each search, the cards are pulled from all the items on one shelf. Search information is added to the cards while the volumes remain in the Preservation office.

The search itself consists of three sections: the card catalog search, the bibliographic trade catalogs search, and the stack check. All titles are checked in the card catalog and information about all other editions or copies of the same title is added to the search card. Dates, edition information and location or call numbers are shown in chronological order so the volume in poor physical condition may be related easily to the other holdings of that title. Complete information on the specific edition in hand is added such as the author's dates, information about the original edition if the item in question is a translation, whether the complete works are held which contain a copy of the separate in question, and whether or not the collection contains other works by the same author.

The second step of the search is the check of trade bibliographies to find if commercial reprints or films are available of that title and, specifically, of that edition. A standard set of sources are searched, though if several reprints are available of monographic works, we do not continue to search for film availability. Every title is usually checked in the first four sources listed below, while the others are checked where appropriate.

Sources checked for Film/Reprint Availability

Books in Print. Bowker. Current.
Guide to Reprints. Microform Review. Current.
British Books in Print.
Books on Demand. Xerox University Microfilms. Current.
Guide to Microforms in Print.
National Register of Microform Masters. Library of Congress. 1965 to 1975, cumulative; 1976; 1977; 1978.

Philadelphia Union List Catalog.

AMS File of Reprint CIP Data.
Foreign Trade Catalogs as Appropriate:
Verzeichnis lieferbarer Bücher. German books in print.
Catalogo dei libri in commercio. Italian books in print.
Les livres disponibles. French books in print.
Canadian National Bibliography.
Australian National Bibliography.
Guide to Russian Reprints.
Inter Documentation Catalogs of Microfiche.
Serials in Microfilm. Xerox University Microfilms. Current.
Newspapers in Microform: U.S. 1948-1972;
Newspapers in Microform: Foreign 1948-1972.

Pamphlets under fifty pages are not generally searched in trade catalogs. If a specific edition with notes is being searched, all sources are checked until that specific edition is located.

The third step of the search is the examination of the other editions, copies, or volumes in the set which remain on the stack shelves. The condition of every other relevant volume is noted and other deteriorated volumes are brought back to the Preservation office along with binding samples and editions in good shape for comparison purposes where required. Other deteriorated editions are charged in and all relevant volumes are kept together. Relevant volumes not on the shelf are recalled or put on a Circulation search. This thorough approach ensures that the same title will not need to be searched again when the missing or charged volume appears and is in poor shape.

With the information developed during the search and the relevant volumes in hand, the Head reviews every title with the appropriate bibliographer or subject specialist. Experience has shown that decisions are made more consistently and timely if one person is responsible for the review of the volumes with the specialists, either bringing the specialists to the volumes or taking the volumes to the specialists for review sessions.

Decision-Making and Options

The searched volumes are divided into various categories suitable for

review by the subject specialists and checked for the required information before each session. When a few shelves of items have accumulated for a subject specialist, a review session is arranged and the preservation librarian interprets the information gathered in thesearch for each title. Feasible options are offered on the titles until the bibliographer or curator develops a sense of the options available. Costs for each option are also given so that the specialist will have all the information necessary to make an intelligent decision. The value of the book in terms of subject matter, rarity, and use are all of prime importance in the decision-making process and will dictate the choices available. Thc available options at Yale include:

1. Replacement. Approximately $10-15,000 is spent on this option per year in recent years.
    a. Hard copy: reprint. This solution is one of the most attractive. Many reprinters use acidfree paper in their publications since their market is made up largely of libraries. Reprints are compared carefully with the originals to ensure the exact replacement. Samples from the various reprinters are spot-tested using the Barrow Spot Test to determine if acidfree paper is used. A list of the results is maintained which is consulted when a choice must be made between two publishers or when a question arises about the quality of a specific publisher's products.
    b. Microfilm or microfiche. The choice of a microform replacement ratner than a hard copy replacement depends on several factors. Low-use items or long runs of serials may be transferred to a microformat. Space-savings and lower purchase costs as well as some user resistance and processing problems are other factors which enter into this decision.
2. Reproduction.
    a. Hard copy. If a commercial reprint is unavailable and the volume is needed in the same format, a hard copy reproduction is made in the Preservation Division using a Xerox 4000 photocopier (any copier with double-sided copying capacity and the ability to heighten contrast between the print and brown embrittled paper may be used). Acidfree paper (Xerox XXV Archival Bond Paper is used at Yale; it has been tested by the Library of Congress' Preservation Testing Laboratory). Several other acidfree papers are available for such use. Particular attention is paid to copyright laws to avoid any possible infringement. Approximately 110,000 openings were photocopied in this program in 1977/78 which were bound into 544 books or pamphlets. Approximately $8,000 was spent on this option in 1978/79.
    b. Film. When the subject specialist recommends a replacement for a deteriorated volume in microform based on the nature of the work and the title is unavailable from commercial micropublishers, an in-house filming option is chosen. Photographic Services in

the Yale Library offers most photographic processes. Deteriorated volumes which need to be filmed are examined for completeness by Preservation staff who also provide the wording on each for a bibliographic target based on the Library of Congress' Specifications for the Microfilming of Books (1973). A shelf's worth of volumes are sent for filming at a time so that full reels may be filmed at once. Photographic Services staff build the bibliographic target from an inch-high alphabet set so that it will be eye-legible on the film. The catalog card is filmed before each title along with the bibliographic target, a ratio note, the resolution chart, a Yale identification note, and a "Start" note. Lacunae are noted in the bibliographic target, though a reasonable effort is made to film complete units only, and many gaps are filled through Interlibrary loans before filming. A microfiching program is just starting for use on the large collection of bound pamphlet volumes held in the Yale stacks which have long caused a preservation problem since the paper in each of the 30 or so pamphlets bound together will deteriorate at a different rate, many are different sizes, and many volumes have deteriorated bindings. Approximately $18,000 was spent on filming in 1978/79. Both a negative and positive service copy are produced; the negative is retained in a limited-access storage.

3. Repair.

Those volumes which have good paper but poor bindings and will be retained are held for repair by the Conservation Studio staff, who select items to repair fully, to place in a portfolio (items with loose plates or folio volumes for example), or to fabricate a wrap-around. The wrap-around is a fully protective encasing sized to each item which was designed by Jane Greenfield which is a lesser-used option for items which may not warrant full repair. Jane Greenfield calculated in 1978 that the work done by the Studio staff must be figured at $11 per hour. A wrap-around costs around $3 while a resewing and recasing operation might take 2-6 hours even without paper repair, or much more. Even though the Conservation Studio works on rare materials from Beinecke and other rare collections at Yale, 200-400 volumes are repaired for the Sterling stacks per year. In some cases, deteriorated volumes are retained in wrap-arounds for their value as objects even if they will not be transferred immediately to a rare book collection.

4. Transfer.

Many volumes are offered to collections which are more suitable for their subject or value; the majority of transfer candidates are offered to the Beinecke Rare Book Library and 200+ volumes were transferred there in 1977/78. Many of these volumes are in excellent shape since the Preservation Division serves as a liason to offer Beinecke any item recommended for transfer by staff, faculty, students, or other patrons. Those transferred volumes which require physical attention may then be processed by the Conservation Studio knowing that full repair treatment will be necessary.

5. Withdrawal.

Many volumes are withdrawn without replacement since the Yale Sterling stack collection is rich in exact duplicates from the late nineteenth and first half of the twentieth centuries. Other volumes are now out-of-scope for Yale's collecting aims and still others are undis-

tinguished editions of popular works. The bibliographers and other specialists generally follow a rule concerning unique editions where editions containing notes or introductions are retained in some format to facilitate edition comparisons and historical research. Most of the original volumes which have been replaced and reproduced in in-house programs are sent, along with the straight withdrawals without replacements, to the Gifts and Exchanges Division in Acquisitions for resale in the book sales held three to four times a year. Most of the reproduced volumes have been cut or taken apart and are in extremely poor shape (their location at any book sale can always be identified by the pile of crumbled flakes on the floor). Those volumes which are in better shape may be sold to a dealer or pulled out for higher pricing in the sales. In a few cases, books are reproduced with great care which will subsequently be transferred to other collections. Approximately 1040 volumes were withdrawn without replacement in 1977/78.

After the decision is made on each title, the Preservation staff carry out each option using procedures which ensure the complete processing of every preservation item and activity. The basic search procedure is similar in part to that used by the Bibliography Department but with a specific orientation for preservation which utilizes different sources, more in-depth catalog work, and the relevant volume examination in the stacks which is not normally done by Bibliography staff. For hard copy and film replacements, Preservation staff make out replacement order forms and check them against the "In Process List" to avoid duplication in new orders. Preservation staff also check the card catalog after receipt of the reprint or film to make sure the cards are accurate. Problems with analytics or oversights are caught in this way. In order to identify reproductions for the cataloger, the shelf list card if pulled and a temporary card is inserted in its place by Preservation staff. The shelf list card is sent along with the bound or filmed reproduction for reclassifying or card annotation. The shelf list cards are also pulled for transfers and withdrawals to facilitate identification and processing. Preservation staff process withdrawals before taking them to Gifts and Exchanges by deleting ownership marks and applying the appropriate withdrawal stamp.

Other Activities

Fragments/Mutilations. Loose pages, empty covers, and other book fragments are sent to the Preservation Division and are searched along with the regular searches in an attempt to identify them or find the rest of the item. Clues used in this search from a loose page might include the subject matter, the running title, page number, and the height of page in centimeters. They are searched in the card catalog which provides subject access. Mutilated volumes with missing pages or illustrations are searched to discover other locations, either within the system or elsewhere, of the same edition. Interlibrary Loans are requested extensively to provide copies of lacunae which may be tipped in. Up to ten or so pages, copied double-sided on acidfree paper, may be tipped in at a time.

Other Filming Programs.

1. Customer-generated negative films. In 1976/77, Yale's Photographic Services Department changed their filming policy in response to a recommendation made by the RLG Preservation Committee so that all negative films of Yale Library items generated by customer orders would be retained by the Library. Charges for positive films made from negatives in the collection were also changed so that they would recover 20% of the cost of producing the negative. The negatives generated from customer orders are processed by Preservation staff by identifying titles and providing the cards for cataloging. The negatives are sent to the centralized negative master storage collection within Sterling.
2. Current serial filming. For several years, Yale has carried out a program of filming certain current serial titles which are printed on newsprint and/or in an awkward format (large folios, for example). Most of these titles are new and have not yet been cataloged or bound. A year's accumulation is sent to the Preservation Division where staff

search to see if a film is available commercially before filming. These titles are searched annually in case a film should become available. This option saves binding costs and space while maintaining the intellectual content of lower-use items.

RLG Activities. The Preservation Division is active in several RLG programs including a cooperative filming project, an experiment in reviewing titles and filling-in gaps before filming.. The Preservation Division is also responsible for examining and processing serial titles which have been designated as "Master Copies" at Yale by RLG; these are unique holdings among the member libraries which Yale undertakes to maintain in good shape.

NEH Preservation Grant. The National Endowment for the Humanities has awarded the Yale University Library a $257,000 three year grant with $56,000 in cost sharing to "survey, evaluate and develop methods of correcting preservation problems in a large academic research library." This grant, to start June 1979, provides stipends for preservation and conservation interns who will be trained in both practical in-house techniques used at Yale and theoretical/historical preservation preograms and activities. A large survey will be carried out to determine more accurately the physical condition of the volumes in most library unitsat Yale. A second part of the survey will investigate the environmental conditions in each library unit. We hope that the results from these investigations will not only aid in planning and provide another study which documents the critical nature of the problem but will become a training mechanism for the interns which will aid in the solution of many of the problems uncovered. Several new projects will be instigated and a closer look will be given to the whole decision-making process.

Columbia University
Sherry Byrne

Preservation Discussion Group, PLMS,
ALA, June 1980

DEVELOPMENT OF PRESERVATION AT COLUMBIA

In 1974, Columbia University became one of the first major research libraries to establish a Preservation Department. The concept of a Department responsible for the coordination of a system-wide approach to the preservation of library materials emerged from a study performed by the management consulting firm of Booz, Allen and Hamilton. Their investigation of the organization and staffing of the Libraries of Columbia University was completed in 1972, and was sponsored by the Association of Research Libraries in cooperation with the American Council on Education. The study examined existing patterns and recommended how to better arrange and deploy the resources of 35 operating libraries to develop and perform their roles effectively to meet the challenges and demands of the future. It recommended the hiring of a preservation librarian: to bring together the activities of the units responsible for shelf-processing, binding and repair, and reproduction; to plan and implement programs for the identification and processing of materials requiring preservation decisions; and to provide technical advice and guidance on specific preservation problems to individual operating units. The recommendation proposed a shared preservation responsibility by all three branches of the library: the Services Group, the Technical Support Group, and the Resources Group, of which Preservation is part. The identification of materials that require preservation decisions was included as the responsibility of bibliographers and librarians and support activities including collection maintenance were to be carried out by the professional and supporting staff.

The Binding and Reprographic Sections had been providing services for the Library as far back as the 1930's. Binding and shelf-processing had been shifted about within the organization several times, while the Reprography Section, because of its unique functions, had always existed in a somewhat tenuous relationship with the rest of the library organization. Both had had to make their way without

benefit of close administrative support and direction for a considerable time.

The Booz, Allen recommendation made use of operating units formerly fulfilling some type of preservation function, however inadequate or misdirected, and outlined the basic organization on which to build a preservation program. In the 5½ years since 1974, the Preservation Department has seen many dramatic changes. Increasing sophistication of the staff, the development of programs, expansion of services, stream-lining and simplification of procedures, and the redistribution of responsibility and resources have all been the rule rather than the exception. The building of the Preservation Department has been a continually evolving process. In order to describe the department as it is, let me also mention where it has been and where it is headed.

The Preservation Department is comprised of four units: the Bindery, Materials Processing, the Reprography Laboratory, and the Preservation Records Office. The staff consists of 23 full time members, six of whom are professional and supervisory staff.

The Binding Section provides in-house binding and repair for the general stack collection housed in Butler Library as well as for the 35 departmental libraries and distinctive collections situated on the campus. An expanded program of protection and repair, aimed at the general collection, has been the major focus of the Binding Section. Additional commercial binding treatment alternatives have resulted in a deliberate shift away from the high volume routine binding of new paperback material and pamphlets in-house. Most of this material can be suitably bound more cheaply by a commercial binder. The re-routing of the material has freed the binding staff to concentrate on the expansion of repair treatment with emphasis on protective measures such as boxing and portfolios. The protective containers are made for brittle and fragile material that cannot be bound or re-bound and must remain in the collection.

At a later time, some will be replaced, but physical protection is necessary to hold the pieces together and upright on the shelf until that distant time. This type of protection is also suitable for rare or irreplaceable material that must be retained in its original condition. Materials that can be repaired are released, re-bound or re-backed, replacement or loose pages are tipped in, torn pages are mended and a variety of other repairs are performed. We are continually examining the quality of materials used in repair and processing; experimenting with new treatment methods; and exploring additional styles of protective containers for fragile material.

The shift in the type of binding production required the retraining of staff members to perform increasingly sophisticated repairs. Previously, staff jobs were compartmentalized, each person performing a particular task. The goal of the retraining program was to upgrade the overall staff level in carrying out repairs, and to equip each member with the skills necessary to handle a variety of operations. The resulting staff flexibility has increased their capacity to perform and to adjust to changes in work flow. This also permits the full staff to participate in the more efficient system of batch operations.

Material needing repair treatment is identified in the individual service units of the library when books are returned from circulation, reshelved, shifted or cleaned, added to, or removed from reserve, and in a variety of other ways. A binding slip is prepared, and the volumes are sent to the Bindery where the supervisor selects the appropriate repair treatment. Staff members involved in the selection of treatment have benefited from Columbia's Binding & Physical Treatment Handbook which describes the various in-house and commercial treatment alternatives available, and includes general advice about when to bind, how to choose among the options, and some common problems to avoid. Training sessions offered by the Bindery Supervisor have increased the level of awareness about treatment possibilities resulting in an increased sophistication of requests for service. A new revision of the Handbook

has just been completed, and its distribution will again be supplemented by repeated training sessions for professional and supporting staff.

In addition, the implementation of a system of quotas and schedules has resulted in greater control of material flowing into the Bindery and the timely completion of treatment. Cooperation with the collection units, insures that various departments benefit evenly from the Bindery's increasing capacity to handle certain types of work, and that the batch-processing cycle does not result in inconvenient delays.

The second unit, Materials Processing, has historically been part of the Binding Section, often sharing or exchanging responsibility for certain activities. It now functions independently of the Bindery. The unit carries out two major functions; handling the sorting and preparation of new material for commercial binding, and the shelf-processing activities for ~~ready~~ newly-cataloged material and in-house repairs being distributed to almost every library unit.

The number of volumes sent to the commercial binder each year has risen steadily. The commercial binding program has increased due to the development of a new set of suitable binding alternatives. Almost all paperback material and pamphlets (including material with narrow inner margins) are being sent to outside vendors. Preparation of unbound material and the selection of appropriate binding styles takes place in Materials Processing and in each collection unit. In the Processing Section, new paperback material from cataloging is prepared for binding, binding slips are typed, and treatment selected. The service units have the major responsibility for serials. The Binding Handbook, just mentioned, has been the major contribution to the program of staff education in maintenance and rehabilitation. Through the manual, technical staff throughout the library system is being trained in the preparation of unbound materials and the selection of appropriate binding styles.

Shelf-processing procedures have been dramatically stream-lined, providing simpler, faster, and better quality treatment of newly received material at substantially lower cost. Most call numbers are typed, reducing hand-lettering to a minimum and book plates have been almost completely abandoned for rubber stamping. More efficient processing has reduced the unit time per volume and decreased the turn-around-time. Materials Processing production capacity has also benefited from broad job descriptions for staff, providing back-up for the variety of tasks in order to handle dramatic fluctuations in work load patterns.

Our Reprographic unit is the area that has seen the greatest growth and transformation. Microfilm production capacity has greatly increased as a result of a series of improvements. Equipment has been upgraded, the physical space of the laboratory enlarged and remodeled, technical and office procedures adjusted and improved, and the staff size increased. Grants and special project funding have also added to the growth and production capacity of the preservation microfilming program. The two most recent large scale project have been the RLG coordinated preservation filming of serial titles and the Title II-C project to film rare and fragile Chinese material in the East Asian Library. Both projects have brought additional cameras, camera operators and editors to the section. Columbia has also contracted with outside micropublishers to film material when our facility could not accommodate departmental needs. The most recent development in the ongoing transformation has been a redistribution of section responsibilities. To cope with the increasing complexities of both technical and bibliographic requirements for creating archival microforms, and the growing demands for preservation filming, the functions of the Reprography Section have been separated into two units. The technical operations including microfilm camera work, processing and duplicating microfilm, and regular photographic work are the responsibility of the Reprography Laboratory under the direction of a technical supervisor. Pre and post camera operations are now the

responsibility of the Preservation Records Office, headed by a librarian. This includes the coordination of preservation filming, locating of materials, collating and preparation of material, distribution of completed film, and the maintenance of the Master Negative Catalog.

Preservation microfilming as we think of it today is a relatively recent development, even though Columbia has been creating microfilm since the 1930's. The concept of the "master negative" or "microform master" -- usually the camera negative, archivally processed, stored under specified conditions and used only for the creation of service copies -- became widespread in the late 1960's. Before 1977 most of the negative microfilm created at Columbia was sent to the customer to fill microfilm requests. Since that time, master negatives have been retained routinely as standard practice. They are kept under special storage conditions and used only to print positive service copies for patrons or the Libraries. This preservation or preventive filming, a by-product of regular customer requests, prevents costly duplicate filming and reduces wear and tear on deteriorating volumes. This has been born out by the fact that 2/3 of our annual microfilm orders are for prints from existing master negatives.

Requests for microfilm are handled by the Preservation Records Office. Orders either originate in the library or come from outside patrons and institutions, by letter or through inter-library loan request. New procedures have been implemented so that each title is searched before filming. The two step search includes checking Columbia catalogs for identification and verification, and then the National Register and other appropriate catalogs to locate available microform and reprint replacements. Requests for titles already available in microform are returned to the customer with publisher information. Unnecessary duplicate filming is costly to the patron and time consuming to the department.

We are beginning to extend a decision process to material selected for microfilming. A "decision form" and "Criteria for Selection" to be completed by bibliographers and selection officers will be included with every title called from the shelf for filming. The form will require acquisitions type decisions such as an evaluation of the importance of the particular volume to the collection in order to determine whether a master negative should be retained and a positive service copy made for the Library. A systematic approach to the selection of material in need of preservation will improve the efficiency of microfilm production and eliminate unnecessary cataloging time for material no longer useful to the collection. This review process will also accommodate recommendations for the filming of full serial runs when only small portions are requested by the customer. Also, a modest borrowing program will attempt to fill missing gaps. In conjunction with the decision process, we are developing a system for routine requests for preservation filming initiated in departments for deteriorated items.

After filming is complete, the master negative remains in Reprography and the positive service copies are returned to the Preservation Records Office for distribution to the customer or to the appropriate cataloging unit. The full catalog records for all new masters are entered into the Master Negative Catalog. In 1972, procedures for bibliographic control and regular reporting of new masters to the National Register were initiated at Columbia. During the last three years, a Title II-C grant has funded the completion of the Master Negative Catalog which now contains the records of all retrospective and new master negatives held in Reprography.

As microforms become an increasingly acceptable preservation and replacement alternative, and as bibliographic utilities improve the access and control of microforms, demands for production will continue to grow. Our microform facility has expanded a great deal, but will have to grow more to meet such overwhelming demands

for preservation filming.

In addition to the services of the individual Preservation units, the Department functions on another level, as a resource for information and advice. The Binding & Physical Treatment Handbook, training sessions, and informal advice on shelving and handling methods have helped to encourage active responsibility for daily care and maintenance of the collection in the departmental units. The Department has responded numerous times to water problems cuased by flooding and leaky pipes; helped with environmental control; and provided guidance in the planning of preservation projects throughout the library system, to name just a few ways the Department has fulfilled this role.

Columbia has made much progress towards the goal of a system-wide preservation program. It has been the result of a sincere commitment, planning, and adaptability. The library's preservation needs are being identified, existing programs redirected, and new programs designed to fulfill those needs. Our recurring theme continues to be one of change.